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THE SAIER CATALOG OF

# RARE AND POPULAR FLOWER SEEDS VEGETABLE AND GRASS SEEDS

GARDEN BULBS - ALL KINDS

OVER 4,000  
SPECIES & VARIETIES

GARDENER'S SUPPLIES

PIONEER SEED COMPANY

DIMONDALE, MICHIGAN, U.S.A.

Since 1911

NOVEMBER - 1948

Monthly — Number 48-6

## In The Mail

We have been unusually busy the last two months, so much so that we have not been able to get the material ready for the last month catalog. Lily bulbs as well as other fall bulbs have been coming in and orders filed as they arrive. The one disagreeable thing is the Lily bulbs. First, buyers expect the American grown bulbs to be as large as cabbages but they are not, in fact the American grown stock seems to be smaller than the foreign grown bulbs and to be added to this drawback, we seem to have a lot of trouble in getting size from American growers. We get more complaints on Lily bulbs in a months time than in our seeds in several years time.

We especially call our readers attention to the growing of Lily bulbs from seed; it is a simple undertaking, and a lot of bulbs can be grown from a few cents worth of seed. Furthermore, if well grown, you will get good bulbs of flowering size a lot sooner than most people will lead you to believe. The next best move towards planting, which can be done in this is to get seed for early spring planting which can be done indoors in pots or flats, starting them as early as Jan. In the South they can even be started outdoors.

**DRIED HERBS WANTED.** The Herb and Garden Shop, Box 155, Williamsburg, Va., wants dried herbs and any of our readers having any surplus should get in contact with them. By the way, we will have our complete herb seed list in the Dec. issue; this will consist of over 50 kinds.

**WILLIAM F. TILLEY** of New York wants information on *Alternanthera*, we would like to have someone growing this write us.

**CHIRITA.** Many customers grew this this year and Mrs. Frank McKay of Port Orchard, Wash., kindly reports as follows: The seed was planted June 2nd, came up in less than 2 weeks (used a magnifying glass) and now (Aug. 19th) they have their 2nd and 3rd pair of leaves but still are miniatures. I use a layer of sand and peat in bottom of seed jars then a layer of baked leaf mold for the seed bed, moisten carefully and then sprinkle the seed on top, pressing them down gently and keep in a warm shady place. I find this method fine, also for *Saintpaulia*, *Gloxinias*, *Primulas* and *Petunias*.

**MRS. WILLIAM JACKIE** write about the *Gesneria* family of plants and especially asks about *Alloplectus*, *Naegelia zebrina*, *Trichosporum lobbianum* or *tricolor* and *Episcia fulgida*. Are any of our readers growing any of these?

**FROM INDIA.** A customer from India write in to inform us the *Clerodendron squamatum* is a shrub, 2-5 ft. tall bearing panicles of scarlet flowers, it is a widely grown tropical plant. Also that *Hedychium coccineum* is 1 foot spikes instead of 1 inch, and that we miss *H. gardenieri*, a fine species that should be grown in every garden. We are glad to say, too, that we have this seed for this season. We thank this reader for these corrections and suggestions.

**BELLS OF IRELAND.** And while talking about corrections, Mrs. A. Rasmussen of Edgewater, Wis., write us about our listing *Moluccella* as "Bells of Scotland." Well, Mrs. Rasmussen, there being ¼ Scotch in me, I probably had "Scotland" in mind of "Ireland" but that will be corrected, to be sure, for Ireland it is. In her

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## Gesneriaceae

Requests have come from many readers of this catalog for further information regarding, and offerings of, gesneraceous plants. In spite of the beauty of the florists' *Gloxinias*, the family never became popular until *Saintpaulia*, the African Violet, caught the fancy of plant lovers. Apparently many beautiful kinds were grown in greenhouses a century ago, and more recently such Asiatic collectors as Forrest and Farrer sent back *Boea*, *Didissandra*, *Roettlera* and other gems. Where are they now? Styles change, and with the passing of the British bulb enthusiasts a great many treasures disappeared from cultivation. Today, no catalog lists seed or plants of most, nor can they be found in the exchange lists of the most comprehensive botanic gardens.

Pioneer is doing its utmost to make available once more these elusive treasures, but at present has been able to obtain seed of only the following: *Chirita*, *Ramondia*, (currently *Ramonda* is the preferred spelling), *Saintpaulia*, and *Streptocarpus*. Orders have been placed with collectors in India for other sorts, which it is hoped will be available by next spring. *Achimenes* are grown to a limited extent, and we hope for a supply for spring planting. But there are still many kinds that at present are little more than names to us, all of which are well worth

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## Campanulas

We are very sorry to have overlooked the credit to the very nice article in the August issue or *Campanulas* which was written by Mr. Robert M. Senior of Cincinnati.

Mr. Senior is probably the best authority on this genus, in the country and his garden of *Campanulas* must be very complete.

By the way, the Quarterly Bulletin of the Alpine Garden Society which has been recently received, contains a very good article by Mr. Senior on Annual *Campanulas* of Syria and Palestine. Some 8 species are listed and discussed.

## Calceolaria Dippes Pansy-Flowered

New Double Pouched Introduction

We are pleased to introduce the new double pouch *Calceolaria* named "Dippes Pansy-flowered". There has been no other *calceolaria* with double bloom before. In 1942 when this *Calceolaria* was first produced in Germany the upper part was still small but since has been enlarged so that now it produces sensational blooms. The upper pouch equals in size the lower one and even surpassing it.

The new flower gives the impression of a Pansy with the aureola along the rim of the upper pouch and its large blotches on the lower one. This new feature is increased by a brilliant display of fascinating colors with red and yellow predominating. There are also other odd markings that will attract attention. The present offering is in spotted and blotched varieties mixed and next year will be offered separately. Large packet, \$1.00.

**CULTURAL DIRECTIONS:** Sow *Calceolarias* from July to Sept. for florist use, but for the individual, they can be started later as time of blooming is not so important. The seed being very fine it is recommended to sow very thinly and to mix the seed with fine sand and not to cover the seed after sowing. Keep seed pan moist and warm, with a pane of glass over it. After sprouting, prick off and plant in small pots. Shift them once again and winter them over inside; in early spring shift to larger pots. They prefer an airy and shady place for blooming freely, if possible in the open (which is possible in late started seed), protected from rain and too much early sun. They bloom in about 8 months. They are easily grown in pots but tolerate sandy soil is best. They are best in a greenhouse or conservatory. When sown in a cold frame, to March, you can bring them to bloom in a rock garden doing best in rich

## A Heather Garden

The hardy Heathers, which are mainly of European origin, can, with care, be readily grown from seed. Most of them have a long flowering period and it is possible to have a Heather garden with flowers for every month in the year except in the coldest districts.

In Europe, the white form of the common heather, *CALLUNA vulgaris alba*, known as "lucky white heather", is largely grown for use in bridal bouquets and for wedding buttonholes for the guests.

Heathers are a source of honey for bees and heather honey is greatly esteemed as an article of diet.

I can only give you details of the method of culture I use and this could doubtless be modified for use in the various sections of the U. S.

I use "John Innes" seed compost (omitting the lime). The seed is mixed with 10,000 times its bulk with clean sharp sand and sown on the surface of the compost in a frame facing the west. The frame is kept shaded during

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## Seeds and Bulbs

We are especially interested in contacting anyone having the following in seeds or bulbs. If located at any great distance please state strains and any other matter pertaining to their description and growth that would be of interest. Also quantity of seeds available. *VALLOTA speciosa* (Scarborough Lily) or other species.

*AMARYLLIS belladonna*  
*BRUNSVIGIA josephineae* or other species  
*HIPPEASTRUM* species.  
*BRUNSVIGIA gigantea*  
*LYCORIS* species, especially *L. radiata* and *L. aurea*.  
*IRIS kaempferi*.

*Leontice* (*Berberidaceae*), a new species, 2 are listed as *Bongardia* and *Gymnospermum*.  
*Aceranthus*, 3 species, Japan alpine.

*GLAUCIDIUM*. (*Ranunculaceae*) China and Japan.

*LEITNERIA floridans*. American

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## Fall Sowing Of Seeds

During the heat of summer, enthusiasm for gardening often lags, to return with the cool days of early fall. There is much work to be done at this time, removing the weeds for which one could not summon energy on blazing August days, planting the Dutch bulbs and the Lilies, as well as the bearded Iris if this was done on schedule, moving shrubs to more suitable positions, and a host of minor details which will help to avoid the spring rush.

A little time should be taken for sowing of seeds, some of which must be planted in fall, while others will do quite, or nearly, as well as if sown in spring, and in addition will be stronger and better able to survive the summer. A well-worked nursery bed, in some out-of-the-way spot, will be satisfactory, especially for the larger seeds. It will pay, however, to nail four boards together into a rectangle, to make a cold frame, even a rough one; if a hotbed sash or old window is available to place over the top, very well, but wire cloth will serve about as well, and is far less expensive. The latter may be simply tacked over the frame, not to be removed until fairly settled spring weather, but if glass is used, it should be removed during freezing weather to allow the full effect of snow and cold on the seeds.

Seeds for fall sowing fall into two classes. The first, comprising those that will not germinate before spring under any conditions, may be sown as soon as the seed is obtainable. Others, which may take a fancy to coming up during a warm spell in late autumn, should not be put in the ground till the latest possible moment, normally November; one does, of course, run the risk of an unusually early winter which will prevent such late sowing, in which case the seeds must be held over till early spring.

**SEEDS WHICH WILL NOT GERMINATE IN FALL**, and which may be sown now, include the following:

*Aconitum*  
Most *Anemones*  
*Calochortus*  
*Clematis*  
*Crocus*  
*Crataegus*  
*Daboecia*  
*Dicentra*  
*Dictamnus*  
*Fritillaria*  
*Helleborus*  
*Ilex*  
*Iris*

*Lilium candidum*, *giganteum*, *jankae*, *martagon* and its hybrids, *macrophyllum*, Mrs. Backhouse hybrids, *prynaicum*, *szovitzianum*, *washingtonianum*, *Thompsonianum*

*Magnolia*  
*Nomocharis*  
*Paonia*

*Penstemon barrettiae*, *cardwellii*, *fruticosus*, *linarioides*, *montanus*  
*Phlox paniculata*  
*Tulipa*

Other hardy perennials and shrubs are best delayed until the last possible moment before the ground freezes; most of these will not germinate in fall, but as the germination period is variable, it is wisest not to take a chance, especially if the seeds are rare and precious.

—Dr. C. R. Worth

## A German Letter

Dear Mr. Saier:

"My heart leaps up when I behold a rainbow in the sky" . . . . This wonderful poem always touches me when I experience something exceptionally beautiful. For me as a gardener, who loves nature, it may be a single bloom or a fine *Campanula*, a Lily or a *Penstemon* in a clearing in the woods, flush lighted by the sun's rays against the dark green background but also equally, a fine setting of flowers by the gardeners hand.

Why not revel, if the chance is given us, in colors and scents as in the big flower shows of nature, such as the *Crocus* meadows of the Alps, the palms of Elche in Spain, the Lotus flowers in Indian waters and so many other festivals of nature. Heaven seems to have blessed these latitudes with preferences and the wanderers reflections stand also above business interests if he sees first the glorious bulb fields of Holland the rose fields (for attar) in Bulgaria, The Daffodills in Devonshire, the Mimosas and Carnations on the Riviera and last but not least, the flower fields of the big centers of seed growing in Germany.

I have just returned with my daughter, who is our hybridist, as you know, from a walk over those nearly endless stretches of flowers here and one can be really enthusiastic with each repeated visit—the vast carpet varying almost daily in color. Every day a new kind of flower opens its bud here; there is always a "rainbow in the sky," reflected on the surface of the globe. We gardeners here know that you have also wide areas of flowers in California and they must be a marvellous sight too. They differ from ours as the summers here are cool and rainy so that we do not need irrigation. The climate is rather rough and the thermometer often shows sub-freezing degrees in mid-May and approaches freezing point also in June. But the plants are hardened, there is no luxurious growth, but a slow sturdy one; seeds ripening

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## The Alpine Garden

One of the most outstanding of horticulture organizations, the Alpine Garden Society of Great Britain, has as its purpose encouraging the introduction of and interest in, plants suitable for cultivation in rock and alpine gardens, alpine houses and frames.

It publishes a Quarterly Bulletin of about 80 pages, very handsomely illustrated, which is indispensable to the rock gardener. Cultural notes, photographs of fine specimens, and accounts of plant collecting expeditions are some of its features.

A Panel of Experts answers questions regarding difficulties encountered by members. A feature of interest to visitors to the British Isles is a series of shows held yearly, exhibiting the newest and finest in alpine plants.

Membership in the Society is \$4 per year; new members subscribing before the end of the year will receive in addition to the 1949 Quarterlies, that for December 1948.

To subscribe to the Society, or for further information, address Dr. C. R. Worth, Groton, N. Y.



**ABIES (AY-bi-eez)**

—webbiana. ABES-1. Pkt. 30c  
The needles are 1-2½ inches long, flat and silvery on the lower side, cones cylindrical, 6 inches long; a Himalayan tree from India.

**ACACIA (ah-KAY-shah)**

—augustissima. ACAC-3. Pkt. 50c  
—constricta. ACAC-2. Pkt. 50c  
Ornamental shrub with numerous yellow flowers, native of Texas.  
—raemeriana. ACAC-1. Pkt. 50c  
—torulosa. ACAC-4. Pkt. 50c

**ACHILLEA (ak-i-LEE-ah)**

(Milfoil or Yarrow). Hardy herbaceous perennials easily grown in any good soil and sunny location, flowering from June to Aug. or later. Flowers in clusters of small heads, white and yellow very good as cut flowers. Seed planted indoors in March or early April and set out doors early in May, have good chance to flower first season. Seed also can be started out doors in May or June, setting out in garden in Sept. or Oct. for next year's flowers. Set plants 1 ft. apart; heights 1½-3 ft. Bone meal around plants in spring is good.

—chrysocoma. ACH-4. Pkt. 25c  
Dense woolly foliage and bright yellow flowers; HP, 9 inches.  
—filipendulina. ACH-5. Pkt. 25c  
A showy, tall species of robust habit, large yellow corymbs, HP, 5 ft.  
—millefolium. ACH-6. Pkt. 25c  
The native Yarrow of England, with round heads of white flowers, HP, 2 ft. tall, June-Sept.  
—Cerise Queen. ACH-7. Pkt. 25c  
A beautiful Milfoil with rosy-cerise flowers, HP, 2 ft.  
—Crimson Beauty. ACH-8. Pkt. 25c  
A beautiful bright colored Yarrow, HP, 2 ft.  
—Parkeri. ACH-10. Pkt. 20c  
Large clear yellow flower heads, excellent for cutting; prefers dry place, evergreen, 2½-3 ft., HP.

—planifolia. ACH-9. Pkt. 25c  
A pretty double white flowered variety, 2 ft. high and very much grown both for the border and cut flowers, June-Sept., HP.  
—Taygetea. ACH-8. Pkt. 50c  
A beautiful NEW variety with fine lemon colored flower heads, HP, 1 ft.

**ACHIMENES (ah-ee-men-ees)**

Tropical American plants usually grown in Greenhouses for their showy flowers and can be planted out in the garden during the summer; thick tuberous roots, gloxinia-like flowers in red, white and violet, etc. Start seed early indoors under tropical conditions.

—Finest Mixed. ACKM-1. Pkt. \$1.00

**ACONITUM (AK-oh-nyt-um)**

Herbaceous perennials, common name Monkshood. A. napellus is the poisonous species grown for the drug aconite. Seeds germinate slowly and usually are sown out doors in May or June in partial shade, or they can be started indoors in March or April. Plants do best if not transplanted. Thin to 18 in. apart when well started. Transplanting should be done in Sept. Bone meal is good fertilizer.

—P. Imatum. ACD-1. Pkt. 20c  
Blue flowers 2½ in. across, found in Himalayan pastures up to 15,000 ft., HP.  
—Wilsoni. ACD-3. Pkt. 50c  
Handsome spikes of very large, porcelain blue flowers, late, very fine; HP, 3 ft.  
—Barker's Variety. ACD-2. Pkt. 60c  
A beautiful novelty in an amethyst-blue color, HP, 6 ft. tall.

**ACROCLINIUM**

(ak-roh-KLIN-i-um)

(Correct botanical name, Helipserum—(see LIP-ter-um)—roseum). An annual crown mainly for its dried flowers, it being one of the best "everlasting" for drying, cut flowers before fully open; they retain their color for years. Flowers daisy-like, 2-in.-3-in. across, double and semi-double, petals of silky appearance, plant about 1-2½ ft. tall. It is one of the driest of the annual group. Seeds generally sown outdoors where plants are to grow, or they can be started indoors where early flowers are wanted; space plants 6-in.-12-in. apart.

—grandiflorum. ACR-5. Pkt. 20c  
A much improved type with large flowers in a variety of colors, HHA, 1 ft.  
—album flora pleno. ACR-6. Pkt. 20c  
With double white flowers, HHA, 1 ft.  
—roseum. ACR-2. Pkt. 15c  
This is a very pretty everlasting flower; rose-colored ray with a yellow disk, HHA, 1 ft.  
—album. ACR-3. Pkt. 15c  
A very neat variety with white ray, HHA, 1 ft.  
—flore pleno. ACR-4. Pkt. 20c  
A fine double flowered variety with rose-colored flowers, HHA, 1 ft.

—Sensation Giants. ACR-1. Pkt. 15c; ½ oz. 85c  
This strain has flowers fully half again as large as the old type, medium rose to light pink, making beautiful cut flowers and ideal everlastings.

**ADENOPHOR.**

(ad-e-NOF-oh-rah)

Perennial plants of the Campanula or Bellflower Family and called Ladybells. They are very little known in the U.S. but are similar to the Campanulas; flowers bell-shaped, nodding, in erect spikes or racemes. Resent being disturbed when once established.

—Bulleyana. ADEN-1. Pkt. 25c  
Pendulous pale blue flowers on stout leafy stems, HP, 2 ft.

**ADONIS (ah-DOH-nis)**

The annuals are hardy, growing well in shaded locations or under trees. Foliage, dark green, finely cut, terminal flowers solitary crimson or scarlet with a dark colored base, May-June. The perennial Has a downy white foliage and large umbels of soft lilac flowers, HBB, 2 ft. also desirable as a border plant; yellow flowers in May or June. About 1-ft. tall. Sow seeds of annuals outdoors in late April or a month earlier indoors; the perennial sorts may be sown in spring or fall.

—aestivalis. ADON-2. Pkt. 15c  
(Summer Adonis). Hardy annual with scarlet flowers, June-Aug.

**AGAPANTHUS**

Blue Lily of the Nile. Beautiful flowers from So. Af. blooming in late summer; easy to grow in any good garden soil; tender to heavy frost in N.; should be grown in pots or tubs. They form beautiful clumps if left undisturbed.  
Fresh seed should be sown which is ready in August.

—Hybrids. AGAP-2. Pkt. 50c  
Seed saved from a rich collection from palest blue to deep blue and white and in some 12 different shades.

—longispithus. AGAP-2. Pkt. 30c  
A new species that is becoming very popular; flowers on 4 ft. graceful wiry stems, very floriferous; compact growth.

—orientalis. AGAP-3. Pkt. 30c  
Large heads of blue flowers on 4 ft. stems, broad evergreen foliage; extensively grown in S. Calif.

—alba. AGAP-4. Pkt. 30c  
Pure white form; quite rare.

—umbellata maximus. AGAP-1. Pkt. 40c

**AGERATUM**

A most popular half hardy annual especially used for borders, edging and bedding. It also makes an easily grown indoor plant. All are free flowering, the plants covered with flowers from early summer till frost, easily grown in any good soil. Seeds are usually started indoors 4-6 weeks before time to set out—after frost danger. Strains offered are especially selected for uniform growth. In the fall, pot up a few of the smallest plants, cutting them back, and grow on indoors for winter plants. The taller varieties, about 10-12 in. tall, make good cut flowers. The dwarf sorts make ideal rockery plants. When seed is sown outdoors in May, plants flower in August. Rain does not damage the flowers.

—lasseauxi. AGER-1. Pkt. 15c; ½ oz. 50c  
Delightful rosy mauve; fine cut flower, 20 inches.

A. MEXICANUM:  
Also listed as A. houstonianum. This species includes all the popular varieties of Ageratum as follows:

—Blue Ball. AGER-2. Pkt. 15c; 1/16 oz. 40c  
A deep blue, ball-shaped plants very compact and extra choice, 9-in.

—Blue Bedder. AGER-3. Pkt. 20c; 1/16 oz. 40c  
A deep lavender-blue on compact 4-in. plants; very pretty.

—Blue Cap. AGER-4. Pkt. 20c; 1/16 oz. 40c  
Rich blue in close heads, dome-shaped plants, fine for rockery or edging, 8-in.

—Blue Star. AGER-5. Pkt. 10c; ½ oz. 55c  
A splendid deep blue variety from Holland, fine for edging or bedding, 8-in.

—Fairy Pink. AGER-6. Pkt. 20c; ½ oz. 55c  
Softest salmon rose-pink, an unusual color in ageratums, very pretty for bedding, edging or rockery and also excellent pot plants or window boxes, 6-in.

—Midget Blue. AGER-7. Pkt. 20c; 1/16 oz. 50c  
Rich blue in a low extra compact uniform plant for edging or bedding, 2-3 in. tall.

—Purple Perfection. AGER-8. Pkt. 15c; 1/16 oz. 40c  
Deepest blue, plants especially good for bedding and boxes where a 9-in. plant is needed; very free-flowering.

—Silver Star. AGER-9. Pkt. 15c; ½ oz. 70c  
A pretty dwarf white flowered type especially suited for edging, 8-in.

—Swanley Blue. AGER-10. Pkt. 15c; 1/16 oz. 40c  
Thickly bunched semi-dwarf plants in a pretty shade of azure-blue, 7-in. tall.

—White Queen. AGER-11. Pkt. 15c; 1/16 oz. 40c  
Pure white flowers on 8-in. plants especially suited for a white ageratum in bedding, cut flowers, edging, etc.

—White Beauty. AGER-12. Pkt. 15c; ½ oz. 60c  
An extra large flowered and the best white in ageratums, plants 7-in. tall.

—Zuriblan. AGER-13. Pkt. 15c  
A beautiful dwarf blue novelty from Switzerland that is claimed to be extra good.

NOTE: Perennial ageratums, so called, see Eupatorium and Lonas.

**AGROSTIS (ah-GROS-tis)**

A group of tufted annual and perennial grasses including some lawn grasses but ornamental grasses as listed here. Known also as Bent Grass.

—nebulosa. AGRO-1. Pkt. 15c; ¼ oz. 80c

(Cloud Grass). Hardy annual ornamental grass, fine for edging the flower border; dwarf and neat. Plant indoors early transplanting to beds as wanted, 12-15 in. Especially valued as filled in bouquets of flowers.

**ALBISSIA (al-BIZ-i-ah)**

Small shrubs or trees from sub-tropical regions, having graceful feathery foliage and clusters of tassel-like flowers followed by strap-shaped dry pods. They can be grown outdoors in the warmest parts of the U.S. and in the greenhouse farther N. Easily grown from seed.

—stipulata. ALBI-1. Pkt. 25c  
Tall tree with globular heads of flowers.

**ALLAMANDA (al-ah-MAN-dah)**

Shrubs and climbers native of Brazil and grown in the greenhouse in the N. but in far S. they can be planted in the open; have showy purplish or yellow flowers.

—cathartica. ALLA-1. Pkt. 35c  
(Common Allamanda). Has golden yellow flowers 3 inches across, very pretty vine.

**ALLIUM (AL-i-um)**

A genus of bulbous flowering plants of the Lily family of which the flowering onion is especially listed here. Most are hardy perennials having flat or tubular leaves, similar, but smaller, to those of the onion. The flowers form at the end of the stems in spherical clusters or slender

spikes, in many colors and shades. They do best in rich loamy soil and easily grown from seeds which can be planted any time up to August. Space plants 1 ft. or more apart.

—albo pilosum. ALUM-5. Pkt. 25c  
Very robust grower with heads of a great many large flowers of deep lilac, 1 ft., HP.

—atropurpureum. ALUM-2. Pkt. 20c  
Flowering stems narrow but hollow, densely flowered, heads about 1-in. across, color blood red; from Himalayas.

—bolanderi. ALUM-8. Pkt. 50c  
Has umbels of clear pink flowers fringed with white, a very good species for the rock garden, sun or part shade, and does well in sandy, rocky or clay soils, HP.

—cernuum. ALUM-3. Pkt. 20c  
Lavender to white flowers, 1-ft. tall, May.

—geyerii. ALUM-11. Pkt. 25c  
—karataviense. ALUM-1. Pkt. 20c  
Lilac-blue flowers in July, 1 ft.

—ostrowskyanum. ALUM-9. Pkt. 30c  
—pallens. ALUM-12. Pkt. 25c  
—Rosenbachianum. ALUM-6. Pkt. 25c  
Large globular umbels of rose-purple flowers, HBB, 3 ft.

—sibiricum. ALUM-10. Pkt. 25c  
—siculum. ALUM-7. Pkt. 35c  
Umbels of greenish-purple flowers in July, HBB, 1 ft.

—tuberosum. ALUM-13. Pkt. 25c  
The tender mildly flavored leaves are used for seasoning and flavoring; flowers lovely white and excellent for cutting, July, 2 ft., HP.

—grigueum. ALUM-14. Pkt. 25c  
Bell-shaped pure white flowers with green mid-rib on each petal; sun or shade, May-June, 1 ft., HP.

—Allium Blend. ALUM-4. Pkt. 15c  
Contains many species and varieties and of great value to those wishing to grow many types and colors for display or crossing.

**ALNUS (AL-nus)**

The Alder: trees or shrubs with attractive foliage and handsome catkins in early spring. Seed should be sown in spring, only lightly covered, and kept moist and shaded until the seedlings appear; they germinate quite promptly.

—nepalensis. ALNS-1. Pkt. 25c

**ALONSOA (al-on-SOH-ah)**

(Mask-Flower). Plants mostly from tropical America and grown in the N. as tender and half-hardy annuals, also as indoor plants. Foliage dark green and bearing an abundance of 2-lipped scarlet or orange flowers, turned upside down. Sow seeds indoors in spring and set out after frost danger is passed; for growing indoors winter sow seeds outdoors in summer and transfer indoors early in the fall; when thus moved they become shrubby and bloom a long time.

—acutifolia. ALON-2. Pkt. 25c  
A robust species with deep scarlet flowers, (A. myrtifolia), HHA, 2 ft.

—linitifolia. ALON-3. Pkt. 25c  
This is a robust species with light scarlet flowers in confusion, HHA, 2 ft.

—miniata. ALON-5. Pkt. 25c  
Fine compact habit and very free flowering; bright scarlet, HHA, 1 ft.

—Mutii. ALON-4. Pkt. 25c  
Very pretty; delicate pink with crimson centers, HHA, 1 ft.

—warszewiczii compacta. ALON-1. Pkt. 20c

Very shown, bright scarlet flowers, a perennial if grown under glass. A bushy type, 1-2 ft.

**ALSTROEMERIA**

(al-stre-MEE-ri-ah)

South American greenhouse plants belonging to the Amaryllis Family and grown from tuberous roots, treated as bulbs. Plant roots deep in rich soil and give a sunny position; they can be grown outside but must be brought indoors before cold weather arrives. Usually seed can be planted in Aug. or later, in pots, which will bloom the following summer in the garden. Sometimes called Herb-lilies.

—aurantiaca. ALST-1. Pkt. 25c  
Orange, spotted with red, very hardy and free blooming, HP, 3 ft.

—chilensis. ALST-2. Pkt. 30c  
Comes in beautiful shades of pink, crimson and orange, HP, 2½ ft.

—angustifolia. ALST-6. Pkt. 25c  
Flowers similar to A. chilensis but larger; stems 3 ft. tall, colors range thru pink, orange and flame, mainly pinks.

—Ligita. ALST-3. Pkt. 25c  
Large shell-pink flowers; needs protection in cold climates, HP, 1½ ft.

—pelegrina. ALST-4. Pkt. 35c  
Lily of the Incas. Large dark pink flowers heavily spotted reddish purple on inner petals; thick glossy foliage, 14".

—alba. ALST-5. Pkt. 25c  
Pure white form.

**ALTHAEA (al-THEE-ah)**

Annual, biennial and perennial plants found in temperate regions and belonging to the Mallow Family. Easily grown and common in flower gardens; do not confuse with the shrub, Althea. The common Hollyhock belongs here, A. rosea, and is listed in this catalog under Hollyhocks.

—fictifolia. ALTH-1. Pkt. 25c  
The true flg-leaved Hollyhock, a fine plant with deep yellow flowers, HP, 6 ft.

—fictifolia hybrida. ALTH-2. Pkt. 25c  
A mixture of colors of this fine single class of Hollyhocks, HP, 6 ft.

—rosea simplex. ALTH-3. Pkt. 25c  
This is an English grown strain of the finest single varieties and comes highly recommended to us, HP, 6 ft.

**ALYSSUM (ah-LIS-um)**

(Madwort). They come in hardy annuals and perennials and are exceptionally suited for edging and the rockery in sunny positions. They are all easily grown from seed, the annuals being planted early in the spring or started a month earlier indoors and grown cool. The perennials are planted at any time so that the seedlings can become well rooted before freezing weather. Foliage generally grayish, flowers white or yellow, height not over 1 ft. The perennial sorts bloom very early and they make a brilliant display with their yellow flowers. Both types can also be lifted in the fall and taken indoors for winter flowering.

**A. MARITIMUM.**

Under this heading are listed the

popular varieties of Sweet Alyssum, all hardy annuals, known botanically as Lobelia (loh-beu-LAY-ri-ah) maritima, as follows:

—Carpet of Snow. ALYS-1. Pkt. 15c; ½ oz. 90c

Each plant is a flat compact mass of pure snow white flowers and are ideal for low bedding and edging; this is a superior strain, 3-in. tall.

—Snow Cloth. ALYS-2. Pkt. 15c; ¼ oz. 40c

A flat compact variety of pure white flowers that give the appearance of a white carpet, 3-in. tall. Space plants about 5-in. apart.

—Little Gem. ALYS-3. Pkt. 10c; ½ oz. 40c

White flowers, plants 5-6-in. tall and best for tall bedding, boxes or baskets as growth is upright and more open than the compact strains.

—Lilac Queen. ALYS-4. Pkt. 15c; ½ oz. 40c

A special compact deep lilac colored strain, 6-in. tall; very pretty.

—Lilac Queen, W-F Strain. ALYS-5. Pkt. 15c

—Violet Queen. ALYS-6. Pkt. 20c; ½ oz. 60c

The most uniformly deep violet colored strain obtainable; plants compact, fragrant, 6-in. tall.

—Sweet Maritimum. ALYS-7. Pkt. 10c; ½ oz. 50c

Very fragrant, for which it is especially planted, flowers pure white, growth spreading, 12-in.; make sweet plants in boxes or baskets.

—Mixed. ALYS-11. Pkt. 10c; ½ oz. 35c  
Made up of all kinds, low, tall, perennial, etc. Ideal mixture for small children to grow.

—A. Saxatile, Gold Dust. ALYS-8. Pkt. 15c; ¼ oz. 35c

Bright golden yellow, blooming so profusely in the early spring as to cover the plants, 12-in. tall, compact habit.

—Silver Queen. ALYS-9. Pkt. 20c  
Color primrose, an unique color in Alyssum; splendid in the rock garden, 12-in. tall.

—compactum. ALYS-12. Pkt. 15c; ¼ oz. 35c

Compact masses of single yellow flowers, April-May, 1 ft., HP.

**ROCK GARDEN PERENNIAL**

RARE SPECIES MIXED

ALYS-10. Pkt. 20c; ¼ oz. \$1.50

A beautiful collection of many different shades of yellow on compact plants with foliage from light greenish gray to deep green. An excellent blend for the rock garden or for a hardy Alyssum planting. This is an exceptionally high grade collection and not to be confused with regular mixtures.

—lutescens. ALYS-18. Pkt. 20c  
Creamy-yellow, HA.

—minimum. ALYS-13. Pkt. 25c  
A very small growing English variety with white flowers, HA, 2 inches.

—rostratum. ALYS-15. Pkt. 30c  
A pretty species with yellow flowers in abundance, HP, 1 ft.

—citrinum. ALYS-16. Pkt. 25c  
Dwarf compact habit and having masses of pale yellow flowers, HP, ½ ft.

—spinosum. ALYS-17. Pkt. 50c  
This is a very distinct species with a dense spiny growth, white flowers, HP, ½ ft.

**AMARYLLIS (am-ah-MIL-is)**

—Giant Indian Hybrids. AMRL-1. Pkt. 50c  
Seed from a Giant Flowering strain, the best in the world, they usually produce 1-3 stems per bulb, 4-6 giant flowers measuring 6-9 inches on each stout tall stem, 2-3 ft. high. Seed ready between April and June and should be sown fresh; order early. Flowering size bulbs can be produced the third year from sowing.

—Snow Queen. AMRL-2. Pkt. 75c  
Bulb, Lge. 75c ea.; Doz. \$7.50  
Flowers of ordinary size and of purest snow white without any markings; unlike the Giant Hybrids it is very floriferous and hardy. Order early delivery between Oct.-March. Large size flowering bulbs offered.

**AMARANTHUS**

(am-ah-RAN-thus)

(Amaranth). The plants grown for garden decorations are valued for their colorful foliage and in some species, for their showy, tassel-like heads. Made up of many red or brownish flowers. The poorer the soil the more brilliant the foliage, in fact rich soil will produce disappointing plants. Start seed out doors in May or June, and thin plants to 18-24-in. apart. They require a sunny place.

—abyssinicus. AMAR-1. Pkt. 10c  
Very pretty in groups, 5 ft.

—caudatus. AMAR-2. Pkt. 10c  
(Love-Lies-Bleeding). Has long slender, drooping dark red flower tassels formed in bunches and shown in group plantings, 3-5 ft.

—caudatus viridis. AMAR-3. Pkt. 15c  
A yellow flowered variety, height 3 ft. Same as A. caudatus but with white drooping flowers, HA, 2 ft.

—cruentus. AMAR-4. Pkt. 10c  
(Prince's Feather). Red flowers, 3-ft. tall. Pkt. 15c

—hypochiriacus. AMAR-10. Pkt. 20c  
(Princess Feather). Erect spikes of dark purple flowers, HA, 3 ft.

—paniculata, Oeschberg. AMAR-5. Pkt. 15c  
Erect, dark red flowers, a new sort that should be very good.

—tricolor splendens. AMAR-6. Pkt. 10c  
(Joseph's Coat). Rich scarlet-crimson foliage prettily variegated yellow and bronze-green; striking in the border, erect, 3-ft.

—Molten Fire. AMAR-7. Pkt. 15c  
Deep maroon foliage, each branch being tipped a fiery crimson, poinsettia-like, 4-ft.

—Mixed Kinds. AMAR-8X. Pkt. 10c; ¼ oz. 35c  
Contains all the above sorts with others as received. They should make a good showing in a waste place, that is high, dry and of good soil, such as rubbish dumps, etc.

**AMBERBOA (am-bur-BOH-ah)**

Annual plants with jaggedly cut or divided leaves and flower heads in purple, blue or pink. They resemble Bachelor Buttons. Very easily grown from seed which should be sown where plants are to flower, HHA. Natives of Spain and Morocco.

—muricata. AMBR-1. Pkt. 20c

An easy growing, long blooming, free flowering half hardy annual; 3-in. lace stars of pale purple with creamy centers; cuts well and does best in dry soils, sow seeds in position.

**AMMOBIUM (a-MOH-bi-um)**

These are annual Australian plants grown as everlastings. They prefer definitely a sandy soil. Very easily grown; bears a profusion of small white flowers having yellow centers which brighten the garden. Seed can be sown in spring early or in fall for early start. If cut before they are in full bloom the flowers will remain white; hang in a shady airy place to dry; if cut later the flowers become yellowish. They make good ever-lasting flowers.

—alatum. AMOB-1. Pkt. 20c; ¼ oz. \$1.00

Flower heads 1-2 in. across, pearly white, the plant white cottony, 3 ft., HP.

**AMSONIA (am-SOH-ni-ah)**

Perennials, 1-3-ft. tall, having bluish flowers followed by rather attractive milkweed-like pods. Can be planted in border or amongst shrubs. Easily grown from seed.

—labergemontana. AMON-1. Pkt. 15c

A very desirable perennial tolerant to both sun and shade; has good foliage and



## ANEMONE

**CORONARIA:** (Poppy-flowered Anemone). The spring flowering species are very beautiful in both single and double flowering types; the flowers are 2-2½ inches across, blooms in June. They are not exactly easy to grow as they succumb to severe heat as well as severe cold; in milder sections of the East, South and Southwest they can be grown outdoors during the winter, but in the North they require much protection. Plenty of leaf mold, with sand, a sheltered position are their main requirements. When the tubers form they can be set out in the spring; seed should be sown in a cold frame, they germinate slowly. Plants are 1-1½ ft. tall.

—**Monarch.** ANEM-2. Pkt. 15c  
A new Swiss variety of spring flowering Anemone.

—**Single Giant French Mixed.** ANEM-3. Pkt. 20c  
A beautiful strain received this year from France, having large single flowers in fine colors.

—**Hollandia.** ANEM-5. Pkt. 15c  
—**French Caen.** ANEM-6. Pkt. 15c  
Single giant flower type in best colors.

—**Japonica.** ANEM-9. Pkt. 25c  
Autumn flowering or Japanese Anemone, has flowers white or tinged with rose or purplish to 3-in. across, Sept. to frost; to 3-ft. tall.

### ROCK GARDEN SPECIES:

—**albo-violacea.** ANEM-27. Pkt. 35c  
Small species from Anatolia, relative of *A. pulsatilla*; shallow white flowers with blue reverses for rock garden, HP.

—**alpina.** ANEM-1. Pkt. 20c  
A choice alpine plant, white tinged with rose, likes peat and partial shade, HP, 1-ft.

—**biflora.** ANEM-31. Pkt. 25c  
—**cyndrica.** ANEM-11. Pkt. 25c  
Tall native species, greenish white flowers and handsome foliage and seed heads; for naturalizing at edge of woodlands, 3 ft., HP.

—**demissa.** ANEM-15. Pkt. 25c  
A most variable species, ranging from 3 in. to 3 ft. in height, and accordingly suited to shady places in rock garden or border. It is impossible to predict what will come of the seed, for not only does the plant vary in height but has flowers either borne singly or in large bunches; small flowers or large, ranging in color through white, blue, violet-purple, pink, crimson and golden yellow. It likes rather cool rich soil, with light shade. Seed rather erratic in germination, HP.

—**drummondii.** ANEM-32. Pkt. 50c  
—**globosa.** ANEM-12. Pkt. 25c  
Native of Mont. Round seed head, bronze-green, 15-in. tall, May-July.

—**magellanica.** ANEM-21. Pkt. 25c  
A charming species from the Straits of Magellan having sulphur-yellow flowers, HP, 2 ft.

—**Mrs. van der Elst.** ANEM-22. Pkt. 50c  
A very rare form of this species in a beautiful rose color, HP, 1 ft.

—**magellanica.** ANEM-36. Pkt. 35c  
A giant form, creamy white flowers and woolly seed heads, very hardy, 1 ft., HP.

—**montana.** ANEM-29. Pkt. 35c  
Allied to *A. pulsatilla*, dark green foliage and deep purple flowers, 1 ft., HP.

—**patens naltianalis.** ANEM-13. Pkt. 25c  
Good. Pasqua Flower. Purple flowers in early spring before even its own woolly leaves unfold; easy as it is good, 6-10-in. tall, April-May.

—**pulsatilla.** ANEM-10. Pkt. 20c  
Violet flowers, likes chalky soils, pretty spring flowering; April-May; 1 ft., dwarf habit, plant in spring or fall.

—**rubra.** ANEM-25. Pkt. 25c  
A very fine English form with deep red-purple flowers, HP, 1 ft.

—**styriaca.** ANEM-28. Pkt. 35c  
An early flowering form, very popular in England, HP. Good deep purple, spring flowering.

—**rivularis.** ANEM-24. Pkt. 30c  
One ft. plant with white flowers and blue anthers, very free flowering and very desirable.

—**sulphurea.** ANEM-8. Pkt. 20c  
Pale yellow flowers; alpine type.

—**tetraspala.** ANEM-17. Pkt. 25c  
Pkt. 10c; ½ oz. 40c  
A stalwart plant for the cool border, with large white flowers. It is very similar to *A. narcissiflora* of the Alps and Alaska, but a much larger plant, 2 ft., HP.

—**virginiana.** ANEM-19. Pkt. 25c  
White or greenish flowers about 1½ in. across followed by cylindrical woolly seed heads; for meadows or woods, 2 ft., HP.

—**vitifolia.** ANEM-26. Pkt. 25c  
Related to *A. japonica* and rather similar but from the Himalayas. The heart-shaped leaves are much divided and are covered with silvery hairs. The large flowers are of palest rose, in late summer. For the somewhat shaded border or among shrubs, 13", HP.

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dry sandy soils and in full sun. Especially good for cut flowers. Sow seed in late April or early May, outdoors, or they can be started earlier indoors. Thin plants in garden to 10-in. apart. Profuse bloomers from June-Sept.

—**arabica.** ANTH-3. Pkt. 20c  
A first class annual; pretty golden-yellow flowers, HA, 15 inches.

—**kelwayi.** ANTH-1. Pkt. 10c  
Pure golden yellow blooming July to frost, slightly aromatic odor; attractive foliage; fine cut flower, 2½ ft., June-Oct., HP.

—**montana.** ANTH-4. Pkt. 25c  
Charming specimen producing pure white flowers in abundance, HP, 1 ft.

—**nobilis.** ANTH-5. Pkt. 25c  
(Chamomile). The well known medicinal herb; white flowers, HP, 18 in.

—**Perry's Variety.** ANTH-6. Pkt. 30c  
A bright lemon colored variety of this useful border plant; fine for cut flowers, HP, 2 ft.

—**tinctoria.** ANTH-2. Pkt. 10c  
Golden yellow ray flowers, excellent for mass plantings and for cutting, 2-in. across, HP, 2 ft.

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## ANTIRRHINUM

Snapdragons are popular cut flowers both in the garden and the greenhouse. Early flowers can be had by starting them indoors in February or later on till mid-April. They are tender perennials but must be grown as annuals. The seed being small, care should be used in germinating them, they may be slow. A magus known generally as the Snap-dragon is the most important species. Set plants outdoors as soon as frost danger is past. For winter bloom indoors sow seed in the open in August and transplant seedlings into pots; in more mild climates, these plants can be mulched and carried over outdoors for earlier spring flowers. Pinch out central bud when transplanting to encourage flowers on side branches.

### ALL RUST RESISTANT STRAINS.

—**majus gr. fl. Giant Flowered Hybrids.** ANTR-1. Pkt. 25c; 1/16 oz. 40c  
This is a special strain of exceptionally nice flowers and colors, on robust plants. 2½ ft.

—**Large Flowered Hybrids.** ANTR-2. Pkt. 20c; 1/16 oz. 35c  
2½ ft. in brilliant colors.

—**California Giants, Mixed.** ANTR-3. Pkt. 20c; 1/16 oz. 35c  
2½ ft. tall, taller than majus group and the individual flowers larger.

—**nanum, gr. fl. Mixed.** ANTR-4. Pkt. 15c; 1/16 oz. 25c  
Large flowered, half dwarf plants, excellent for bedding or cutting.

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2½-ft. tall.

### ANTHERICUM (an-THER-i-kum)

Tuberous-rooted herbs of the Lily Family having racemes of small white lily-like flowers and long narrow grassy leaves. Common names, St. Bernard's Lily, St. Bruno's Lily. In the North they require protection and they also make fine cool greenhouse plants or for use in lawn vases in the summer. They require a plentiful supply of water when blooming.

—**liliago.** ANTE-1. Pkt. 50c  
A very neat species with small white flowers, HP, 18 in.

—**lilium majus.** ANTE-2. Pkt. 50c  
(St. Bruno's Lily). Pure white lily-like flowers, HP, 2 ft.

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**ASPHODELUS (AS-foh-del-us)**

Member of the Lily Family and closely related to Asphodeline, having fleshy roots, narrow leaves and lily-like flowers, hardy. Easily grown, preferably in rich sandy loam. These have leafless flower stems, with the leaves clustered at the base.

—**luca.** ASPH-1. Pkt. 20c  
(King's Spear). Grows 2-4 ft., leafy flower stems and fragrant yellow flowers in racemes, 6-18 inches long; thrives in partial shaded border.

—**ramosus.** ASFO-1. Pkt. 30c  
A tall robust species with large white flowers having a purple stripe, HP, 5 ft.

—**species from Pyrenees.** ASFO-2. Pkt. 50c  
Has tall spikes of whitish flowers, HP, 3 ft.

**ASTERS****CHINA OR COMMON GARDEN ASTER:**

Sow seeds indoors 6 weeks before time to set out in their beds which is after danger of frost has passed. Do not crowd, usually a foot apart and use care that they do not suffer a set back thru over watering, crowding or draught. It is best to transplant the seedlings once, As the roots of Asters are shallow, use care in cultivating. Make succession plantings for continuous flowering periods, but when possible use different types which flower at different times. All strains offered are wilt resistant unless especially noted.

—**Single, Choice Mixed.** AST-1. Pkt. 10c  
—**Imp. Giants of Cal., Mixed.** AST-2X. Pkt. 15c; 1/4 oz. 90c

Flowers are large and full, crego-type, on long heavy non-lateral stems, 3-ft. tall, blooming late summer until frost; fine cut flower for florists.

—**Cal. Giant Sunshine.** AST-3. Pkt. 15c; 1/4 oz. 90c

Fascinating new Aster type, called most beautiful in the world, 4-5 in. across composed of a single row of loosely placed outer petals which contrast with the unique yellow quill-like center; 2-3 ft. tall, early to mid-September.

—**Crego, Imp. Mixed.** AST-4. Pkt. 10c; 1/4 oz. \$2.00

Wilt resistant, plants 2 1/2 ft. tall, branching, flowers double, not rounding, petals twisted, excellent cut flower, mid-Sept.

—**Early Beauty, Mixed.** AST-5. Pkt. 15c  
Wilt resistant. Flowers with Crego. Plants 2 1/2-3 ft. tall, with large well formed flowers, excellent cut flowers.

**EARLY GIANT.**

Wilt resistant. Finest large flowered, heavy stem W.R. Aster yet developed; flowers large Giants of Cal. type, 1 1/2 ft. tall. Early blooming 4-6 weeks earlier than Giants of Cal. or mid-Aug.

—**Light Blue.** AST-6. Pkt. 15c; 1/4 oz. \$1.00

—**Rose Marie.** AST-7. Pkt. 15c; 1/4 oz. \$1.00

—**Mixed.** AST-8X. Pkt. 15c; 1/4 oz. 85c

—**Early Royal, Mixed.** AST-9X. Pkt. 15c; 1/4 oz. 70c

Wilt resistant. Branching, 1 1/2-2 ft. tall, mid-Aug., directly following Queen of the Market.

—**King or Needle Type, Mixed.** AST-10X. Pkt. 10c; 1/4 oz. 80c

Flowers are composed of twisted quill-like petals making a very attractive flower.

—**Late Branching, Mixed.** AST-11X. Pkt. 15c; 1/4 oz. 50c

Wilt resistant. 2 1/2-3 ft. tall, branching, large double flowers, early Sept.

—**Heart of France.** AST-12. Pkt. 15c; 1/4 oz. 90c

Wilt resistant. Brilliant red, medium sized flowers, 1 1/2-2 ft. tall, late Aug.

**SUPER GIANTS OF CALIFORNIA.**

This is the largest and most fully double Aster class known; flowers 6-8 in. across, full petaled, graceful, interlacing petals. Plants 2 1/2 ft. tall, 6-8 long, non-lateral stems per plant.

—**Los Angeles.** AST-13. Pkt. 25c; 1/4 oz. \$1.20

Shell pink.

—**El Monte.** AST-14. Pkt. 25c; 1/4 oz. \$1.20

Medium high and very early, medium sized round flowers.

—**Princess, Mixed.** AST-16. Pkt. 15c; 1/4 oz. \$1.20

Wilt Resistant. Attractive new cutting type, 2-2 1/2 ft. tall, branching, early, 3-3 1/2 inch flowers on strong stems and with full deep crested centers surrounded by several rows of dainty plume-like guard petals.

—**Queen of the Market, Mixed.** AST-17. Pkt. 10c; 1/4 oz. 60c

Wilt resistant. Very popular early flowering asters, branching, 20-in. tall, early August, one of the most useful for the early cut flower market.

—**Ballet Queen.** AST-18. Pkt. 15c; 1/4 oz. 75c

Wilt resistant. A fascinating shade of deep salmon-rose, 3 1/2 in. flowers generously borne on 15-20 in. plants; extremely wilt resistant and unsurpassed for cutting or border plantings.

NOTE MARKET GARDENERS: Those wishing larger quantities than 1/4 oz. may take a 25% discount from the 1/4 oz. price for quantities of 1-3 oz., and 33 1/3% discount on 1/4-1/2 lb. lots. For large quantities it will pay you to not only write for quotations but to book your order very early.

**PERENNIAL SPECIES OF ASTERS.**

—**alpinus.** AST-19. Pkt. 15c

A perennial rock garden species, violet-blue daisy-like flowers on 6-in. plants, in early summer.

—**albus.** AST-66. Pkt. 30c

A fine white form of this lovely rock garden species, 1 ft. HP.

—**Wargrave Pink.** AST-33. Pkt. 35c

Delicate lilac-pink variety with large flowers; an English grown strain, HP, 6 inches.

—**Large Flowered.** AST-20. Pkt. 15c

New larger flowered type in mixed colors for rock garden.

—**superbus.** AST-23. Pkt. 20c

Very pretty rock garden species.

—**conspicuous.** AST-67. Pkt. 20c

About 18" tall, good large firm leaves and great flat-top clusters of lavender flowers with conspicuous centers turning from yellow to rich dark red; prefers semi-shade. Well worth growing in border, HP.

—**commutis crassulus.** AST-22. Pkt. 15c  
Small flowered Mont. native species, drought resistant, white, 2-ft., Aug.

—**cordifolius.** AST-35. Pkt. 40c

Has graceful sprays of small mauve flowers, HP, 1 ft.

—**larreri.** AST-24. Pkt. 20c

Extremely large and long-rayed flower heads of lavender with yellow center, borne singly on foot high stems, R.G. or sunny border, 1 ft. HP.

—**Hardy Alaskan.** AST-31. Pkt. 25c

A Michxmas Daisy native to Alaska, 12-24 inches tall and should be useful for hybridizing as well as for the Alaska type.

—**himalaicus.** AST-40. Pkt. 25c

A fine plant for the rock garden, especially suitable to the alpine meadow; also suitable for the front of the border, in sun and well drained soil. The blue-purple flowers have very narrow rays and are about 1 1/2 in. across; 6-18", HP.

—**Hybrida.** AST-25. Pkt. 15c

Especially large flowered.

—**hybridus.** AST-34. Pkt. 30c

This is an English grown strain of these hybrids, which we offer separately; this strain is from the best named varieties, HP, 6 inches.

—**hybrida nama.** AST-36. Pkt. 40c

A wonderful new dwarf race of Asters having masses of blue, white, rose and pink flowers, HP, 6 inches.

—**Novi-Belgii.** AST-38. Pkt. 50c

Another T&M English strain, seed saved from the very best English red and blue named varieties, HP, 1 ft.

—**Novae Angliae.** AST-37. Pkt. 50c

A T&M strain of this beautiful native, seed saved from the best named varieties, grown in England, HP, 4 ft.

—**pyrenaicus.** AST-39. Pkt. 50c

A dwarf species with large blue flowers, HP, 1 ft.

—**sikkimensis.** AST-30. Pkt. 15c

Much branched, heads tufted with many small corymbs; in autumn and found in high pastures in Himalayan Mts.

—**subcoeruleus.** AST-27. Pkt. 20c

(diplotrophoides). In every respect a quite distinct variety 12-in. tall with brilliant violet flowers of good size, end of May to end of June.

—**Star of the Wartburg.** AST-28. Pkt. 25c

NEW. Bright lavender-blue flowers with prominent yellow centers, 4" across; on stiff stems, fine for cutting, 1 1/2 ft. HP.

—**Perennial Aster Blend.** AST-29X. Pkt. 15c; 1/4 oz. \$1.25

Extra choice blend containing not only the above kinds but also many others.

—**Marguerite, Elegance.** AST-60. Pkt. 25c

(Callistephus sinensis). Single mixed flowers, tall growing; very useful for border growing and for cutting, branching habit and free flowering, HHA, 2 ft.

—**Southcourt Beauty Mauve.** AST-61. Pkt. 25c

Mauve flowers, tall branching habit, long stiff stems, and highly recommended for cutting, HHA, 2 1/2 ft.

—**Apple Blossom.** AST-62. Pkt. 25c

—**Lavender Queen.** AST-63. Pkt. 25c

—**Royal Mauve.** AST-64. Pkt. 25c

—**White Swan.** AST-65. Pkt. 25c

The above named varieties of large flowering single Marguerite Asters are very highly recommended for cutting and we list these varieties especially for those who wish to try them out for this purpose. They are English grown and you will find them the best of autumn cut flowers, HHA, 1 1/2 ft.

—**Apple Blossom.** AST-62. Pkt. 25c

—**Lavender Queen.** AST-63. Pkt. 25c

—**Royal Mauve.** AST-64. Pkt. 25c

—**White Swan.** AST-65. Pkt. 25c

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—**White Swan.** AST-65. Pkt. 25c

—**hybrida Monarch Strain.** AUBR-11. Pkt. 60c

A new English grown strain of Aubrietia, well recommended, HP, tr.

—**semi-double.** AUBR-12. Pkt. 60c

An English grown strain, seed from semi-double varieties and in many different shades, HP, tr.

—**leuchtlini.** AUBR-6. Pkt. 20c

Deep purple rose.

—**Mrs. Lloyd Edwards.** AUBR-13. Pkt. 50c

A beautiful violet-purple variety from England, HP, tr.

—**rosea splendens.** AUBR-14. Pkt. 50c

One of the best; large bright rose colored flowers, HP, tr.

—**Vindictive.** AUBR-15. Pkt. 50c

One of the finest of the large flowering English varieties; violet-red flowers, HP, tr.

—**Aubrietia Blend.** AUBR-7X. Pkt. 15c

A carefully made blend of many varieties and species for the flower grower wanting to grow for observation many different kinds.

—**hybrida.** AUBR-16. Pkt. 50c

A beautiful violet-purple variety from England, HP, tr.

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they are useful for bold effects toward the back of the perennial border. Sow seed early in Spring when they usually flower the first year.

- salicifolia.** BUPH-2. Pkt. 35c  
A neat border plant with yellow flowers, a root runner and spreads rapidly, HP, 2 ft.
- speciosum.** BUPH-3. Pkt. 45c  
A showy Hungarian species with bold foliage and yellow flowers, HP, 5 ft.

**CACALIA**—see Emilia.

## CACTUS

Succulent perennials, varying much in their form from tree-like growths to very small plants. Many are not considered hardy in the N. and when grown in the rock garden, plants grown in pots which are plunged into the soil, are used. They are the easiest plants for growing in the house and stand any amount of neglect. Those native to the N. must be perfectly dry during the winter. While some are desert plants, many of the best come from the tropical regions, all of which are tender here. Good drainage is important in all types, water at the roots will ruin them in a single day. Planting on a sloping bed is almost necessary and the soil should be on the sandy order, not a heavy soil. For planting sow a few seeds in a pot with plenty of drainage. Most sorts germinating in 20 days but others may require as much as 4 months. Grow your plants on in pots, both for indoor and outdoor use. Do not allow to freeze and in the fall bring them inside and store in a cool basement where there is a little sunlight. No care is needed during this resting period which should be at least 2-3 months. Another caution, do not water overhead and always in limited amounts and not often.

- cereus, Mixed.** CACT-1. Pkt. 20c  
A mixture S. Am. cereus cactus seed, plants being very much like cereus peruvianus. One of the fastest growing types, flowers white, very large and appear only nights, fruit bright red and is like a delicious apple; grows tall with arms very much like the Arizona Giant Cactus.

- echinocereus enneacanthus.** CACT-2. Pkt. 15c  
(Twisted Rib Cactus, Strawberry Cactus). The delicious fruit taste very much like strawberries, native of S. Texas and N. Mexico, grows in clumps having as many as 100 heads at times; 4-in. in height in 2 years, flowers are rich reddish purple about 2-in. across opening noon to 3 o'clock, April-June.

- ferocactus mizlizenii.** CACT-3. Pkt. 15c  
(Barrel Cactus). Very beautiful scenic desert plant, stems globular to cylindrical often very large to 6-ft. or more; flowers in clusters at top of plant, yellow in color, plant dark green, growth 3-in. diameter in 3 years.

## CALAMINTHA (cal-a-MIN-tha)

Aromatic plants, including herbs and small shrubs, with whorles of tubular flowers, 2-lipped, from white to purple; not only useful in the herb garden, many are also attractive in the sunny rock garden where dwarf easily grown shrubs are hard to find; also used in front of border, all are quite hardy and easily grown in sunny places, in ordinary soil. Botanically very close to Satureia, which includes Summer Savory.

- grandiflora.** CALM-1. Pkt. 30c  
A fine border plant with bright rose-purple flowers, doing well in ordinary soil, HP, 9 inches.

## CALANDRINA

(kal-an-DRIN-i-ah)

Low growing spreading fleshy plants of the Portulaca Family, occasionally grown as annuals in the rock garden or edging in borders. Require a sunny location. Flowers orange-yellow and coppery rose to brick red or crimson magenta.

- amaranth.** COLD-1. Pkt. 20c  
Crimson-magenta, hardy annual.

## CALANTHE (kah-LAN-thee)

Mostly tropical terrestrial orchids which are very popular; they are easily grown by following a few cultural requirements. They have beautiful long racemes of white, rose or pink flowers. They are well worth growing. See Orchids.

- brevisonum.** CLAN-1. Pkt. \$1.00

## CALCEOLARIA

(kal-se-oh-lay-ri-ah)

A very large genus found in Central and South America, comprising prostrate creepers, rosetted plants and shrubs. All have pouch or slipper-shaped flowers, usually of yellow, often with dots and blotches of other colors.

- hybrida rugosa.** CALC-2. Pkt. 75c  
Shrubby varieties in beautiful mixture, GP, 1½ ft.

- mexicana.** CALC-3. Pkt. 35c  
An annual species, with small yellow slippers in profusion in summer; likes a cool moist shady place and should be very happy in the fern bed, HA, 1 ft.

**CALIFORNIA POPPY.** See Eschscholtzia.

## CALENDULA (kah-LEN-due-lah)

They are definitely cool weather loving plants and in the warmer climates should be sown in the fall for early bloom in the late winter and early spring. While they like full sun they cannot stand the burning sun of summer. In colder climates, seed should be started in the cold frame and plants set out as soon as possible for late spring and early summer bloom. In planting Calendulas be sure you choose the proper type for your needs. The outdoor growing sorts are sturdier, more compact growth and much better for garden use, while the forcing varieties for greenhouse use are best for indoor growing.

- chrysanth.** CALN-1. Pkt. 10c  
(Sunshine). Large clear buttercup yellow.
- Campfire.** CALN-2. Pkt. 10c  
½ oz. 30c  
(Sensation). Large brilliant orange with scarlet sheen, somewhat open centers; very good.

- Corniche d'Or.** CALN-3. Pkt. 10c  
½ oz. 30c  
Golden yellow.

- Frilled Beauty.** CALN-4. Pkt. 10c  
½ oz. 30c  
Double orange flowers with frilled petals.

- Lemon Queen.** CALN-5. Pkt. 10c  
½ oz. 30c  
Pretty sulphur-yellow flat headed variety.

- Orange King.** CALN-6. Pkt. 10c  
½ oz. 30c  
FLORIST STRAIN. Reselected Florist

strain with orange-red flowers with dark centers; its long orange petals make it very double, robust growth, long stems; 2½-ft. tall when grown outdoors.

- Radio.** CALN-7. Pkt. 10c; ½ oz. 30c  
½ oz. 30c; oz. 50c  
Double, quilled petals, orange scarlet, pretty.

- Orange Sunshine.** CALN-8. Pkt. 10c; ½ oz. 30c

Like Chrysanth except it is a clear light orange.

- Sunshine.** CALN-9. Pkt. 10c  
Golden yellow, gracefully curled outer petals and incurved center petals, long stemmed chrysanthemum-like flowers, cuts well.

- Yellow Colossal.** CALN-10. Pkt. 10c  
Large Chrysanth type but more double.

- Mixed Florist Calendulas.** CALN-11X. Pkt. 10c; oz. 50c  
Special varieties and strains for greenhouse growing.

- Mixed Art Shades.** CALN-12X. Pkt. 10c; oz. 50c  
Pastel shades in many varieties.

- Mixed Calendulas.** CALN-13X. Pkt. 10c; oz. 40c

## CALLOPSIS (kal-i-OP-sis)

Listed here are the annual species of the genus Callopsis. They are hardy annuals, easily grown and make bright and cheerful garden flowers. Sow seed early in April where they are to grow and thin plants to 6-in. apart if you want a strong growth. The usual height is 2-3 feet and they should be planted in the border in groups; excellent cut flowers. Most of the varieties following come under C. tinctoria, a few under C. drummondii.

- Tall Bicolor.** CALP-1. Pkt. 10c; ½ oz. 40c

Double and semi-double flowers in brilliant combinations of yellow and mahogany and are much more showy in gardens and bouquets than the single varieties; definitely a better strain, 3-ft.

- Bicolor marmorata.** CALP-2. Pkt. 10c; ½ oz. 35c

Bright golden marbled with wallflower red.

- Crimson King.** CALP-4. Pkt. 10c; ½ oz. 40c

Dwarf; red flowers.

- drummondii, Gold Crest.** CALP-7. Pkt. 10c; ½ oz. 40c

Another NEW novelty in a rich golden yellow with a reddish brown zone; flowers 2½-3-in. across and semi-double, 18-in. tall.

- Golden Crown.** CALP-8. Pkt. 10c; ½ oz. 40c

Brilliant golden yellow with glossy maroon center zone, 18-in. tall.

- Golden Ray.** CALP-3. Pkt. 10c; ½ oz. 30c

Dark purplish brown center with broad golden-yellow margin. Dwarf.

- nigra speciosa.** CALP-9. Pkt. 10c  
Quaint reddish maroon flowers.

- Dwarf Mixed.** CALP-5X. Pkt. 10c; oz. 70c

Plants 18-in. tall and in all colors and combinations.

- Dwarf Goblin.** CALP-6X. Pkt. 15c; ½ oz. \$1.00

A novel mixture of 6-inch plants in yellows, reds, browns and pleasing bicolors, in these extra dwarf plants. Here should be an extra good strain for covering large bare spaces, quickly, requiring low colorful plants.

**TINCTORIA:** (elegans or marmorata). Showy border plants and fine for cutting; rays yellow, crimson-brown at base and disk brownish-purple, HHA, 1-2½ ft.

- Beauty.** CALP-10. Pkt. 25c  
Elegant variety of dwarf compact habit, golden flowers, crimson center, 9 inches.

- Dazzler.** CALP-11. Pkt. 25c  
In rich, dazzling colors, 9 inches.

- Lemon Queen.** CALP-12. Pkt. 25c  
Tall lemon-yellow, red zoned, excellent for cutting and border, 2½ ft.

- Star of Fire.** CALP-13. Pkt. 25c  
A mass of Cactus-shaped fiery red flowers, 9 inches.

- The Garnet.** CALP-14. Pkt. 25c  
Covered by a multitude of crimson-scarlet flowers, 1½ ft.

- Tiger Star.** CALP-15. Pkt. 25c  
Rich bronze, striped and mottled yellow, 1 ft. Pretty.

- Mixed Tinctoria Varieties.** CALP-16X. Pkt. 20c

## CALOCHORTUS

(kal-oh-KOHR-tus)

W. Am. plants of Lily Family forming corms and bearing bell-shaped, lilac, yellow or white flowers. They are known under such common names as: Mariposa Tulips, Butterfly Tulips, Globe Tulips, Star Tulips, Sego Lily and Fairy Lantern. They are of great beauty, showing many exquisite tints and markings and varying greatly in form. Hardy in the N. but should be protected against winter heaving. Open sunny positions in light soil and should be well drained, a raised bed being ideal. The corms should be handled much as tulip bulbs; they are also grown in pots but do not force too much.

- macrocarpus.** CALO-2. Pkt. 25c  
Large lavender flowers, 10-18 inches tall, June-July, a native of northern Montana.

- maweanus.** CALO-3. Pkt. 35c  
Pale lavender cups with black spot at band of petals, flowering in early spring; the easiest and most permanent of the genus in the East; prospers in heavy woodland soils in sun or half shade; rock garden plant, 4' high, HP.

- chrysanth.** CALN-1. Pkt. 10c  
(Sunshine). Large clear buttercup yellow.

- Campfire.** CALN-2. Pkt. 10c  
½ oz. 30c  
(Sensation). Large brilliant orange with scarlet sheen, somewhat open centers; very good.

- Corniche d'Or.** CALN-3. Pkt. 10c  
½ oz. 30c  
Golden yellow.

- Frilled Beauty.** CALN-4. Pkt. 10c  
½ oz. 30c  
Double orange flowers with frilled petals.

- Lemon Queen.** CALN-5. Pkt. 10c  
½ oz. 30c  
Pretty sulphur-yellow flat headed variety.

- Orange King.** CALN-6. Pkt. 10c  
½ oz. 30c  
FLORIST STRAIN. Reselected Florist

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FLORIST STRAIN. Reselected Florist

A very rare pure white form of the common Marsh Marigold, for wet locations in sun or light shade, 2 ft., HP.

- leptosepala.** CALT-4. Pkt. 50c  
Similar to C. biflora, but 4" high, HP.

- rotundifolia.** CALT-1. Pkt. 25c  
Glossy arrow-shaped leaves and rather large white flowers with a heart of golden anthers; beautiful for wet places in sun or light shade; 1 ft.

- scaposa.** CALT-6. Pkt. 35c  
For marshy places; flowers yellow; plant 4' tall.

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- scaposa.** CALT-6.



**CATANANCHE****(kat-ah-NAN-kee)**

—**caerulea alba.** CATA-1. Pkt. 35c  
HP from S. Europe known as Cupid's Darts, bearing blue daisy-like flowers from June-Aug., grown both for the border and for everlasting, 2 ft.

**CATHCARTII**

—**villosa.** CART-1. Pkt. 50c  
A Himalayan Poppy often regarded as a Meconopsis; deeply lobed, heart-shaped leaves, golden flowers much like Iceland Poppy; culture same, as Meconopsis, 1½ ft., HP.

**CEANOTHUS (see-ah-NOH-thus)**

Mainly natives of Pacific Coast, ornamental shrubs, handsome, free flowering with dense panicles of small white, blue or pink flowers; not hardy in the North; does best in sunny sheltered positions and well-drained light soil.

—**prostratus.** CEAN-1. Pkt. 50c  
This is one of the choicest dwarf shrubs for the rock garden, flowers blue to white, sun or very light shade, gritty soils with clay or leaf mold; a creeping evergreen shrub, HP.

—**pumilus.** CEAN-2. Pkt. 50c

**CELOSIA (se-LOH-shi-ah)**

(Cockscomb, Chinese Woolflower). Popular annuals, all easily grown from seed and for early plants seed can be started indoors. Do best in a fertile soil and the different types have varied uses, from pot plants to all types of bedding. The Cockscomb are the Species, argentea. All the type listed as cristata, plumosa, childsi are forms of C. argentea. Start seed indoors in March to produce plants to set outdoors late in May.

**CHILDSI or CHINESE WOOLFLOWER:**

—**Mixed.** CLOS-1. Pkt. 10c  
Plants much branched, each tipped with a round woolly flower, dandy for garden display and cutting, lasting well, 2-ft.

**CRISTATA or COCKSCOMB:**

—**Dwarf Empress.** CLOS-2. Pkt. 15c  
Dark velvety crimson-maroon heads of enormous size, foliage red; a carefully selected strain for bedding, plants dwarf, 1-ft. The heads hold their color during winter when used as an everlasting flower.

—**Pres. Thiers.** CLOS-3. Pkt. 15c  
(Glasgow Prize). Similar to Dwarf Empress with velvety-crimson combs and green foliage, 10-in. An excellent dwarf strain.

—**Tall, Mixed.** CLOS-4. Pkt. 10c  
Plants tall, 1½-ft., for bedding.

—**Tall Crimson.** CLOS-5. Pkt. 10c  
Bright crimson, uniform 18-in. plants.

—**Tall Royal Velvet.** CLOS-6. Pkt. 15c  
Rich carmine-crimson, foliage bronze-green with reddish margins.

—**Finest Mixed.** CLOS-7X. Pkt. 10c  
Dwarf varieties, best.

**GILBERT'S HYBRID COCKSCOMB.**

The Gilbert Celosias are all especially good for dried flowers as well as for cutting and florist use. They hold their colors well and should be grown in every Celosia planting.

—**Maple Gold.** CLOS-8. Pkt. 25c  
Lovely ball-shaped flower heads of pink tipped with gold, leaves bright green, 3-ft. Suitable for semi-tall border, very useful for cut flowers, dries well for winter bouquets.

—**Harlequin.** CLOS-18. Pkt. 25c  
A new introduction by Mrs. Gilbert for 1949. Bush type developing both base and side branches until it is a perfect mass of color; color starts as a pink-tipped with gold that turns to salmon then a bright shell pink when fully developed in Sept. Height 18", uniform in growth, leaves bright green. Makes a fine pot plant, lasting a long time; does not fade.

—**Green Gold.** CLOS-9. Pkt. 25c  
An unusual color combination of pastel shades, ball-shaped flower heads, at first a silvery green that, as flower heads develop, becomes flushed with light rose and gold, 30-in. tall, leaves bright green. Very useful as a cut flower and in the semi-low border. This is the only Celosia to date that will take a good color dye after it has been dried for winter bouquets.

—**Rose Beauty.** CLOS-10. Pkt. 25c  
Mammoth ball-shaped combs measuring 10-16" across, a beautiful deep rose-pink on a silver base, unusual and striking, 3-4' tall with bright green foliage, non-branching unless pinched back; unexcelled as either cut flower or dried for winter bouquets keeping its rich color perfectly.

**PLUMOSA or FEATHERED CELOSIA:**

Tall feathery spikes in various colors.

—**Tall Fire Plume.** CLOS-11. Pkt. 20c  
Red foliage, each branch ending in a great fire-scarlet plume, excellent for center of large beds, 3-ft.

—**Gold Feather.** CLOS-12. Pkt. 20c  
Bright golden yellow plumes, 3-ft.

—**Mixed.** CLOS-13X. Pkt. 15c  
Blend of the C. plum magnifica type, 3-ft.

—**Pride of Castle Gould.** CLOS-14. Pkt. 15c  
Select strain, large fluffy plumes in scarlet crimson, 3-ft.

—**Fiery Feather.** CLOS-15. Pkt. 25c; ½ oz. \$1.35  
Dwarf Florist Strain, bright scarlet plumes, for bedding or pot culture, uniform type, 1-ft. tall.

—**Thompsoni, Red.** CLOS-16. Pkt. 10c  
30-in. tall, bright red plumes.

—**Yellow.** CLOS-17. Pkt. 10c  
30-in. tall, golden yellow plumes.

**CELMISA**

—**ceriacea Monroii.** CELM-1. Pkt. 75c  
A striking New Zealand plant with silvery foliage and large pure white daisy-like flowers, HP, 1½ ft.

—**longifolia.** CELM-2. Pkt. 50c  
A hardy mountain Daisy from Tasmania.

**CENTAUREA (sen-tau-REE-ah)**

Herbaceous annuals and perennials, both single and double flowers and sometimes plume or pom-pom-like. There are many species, all of value in the garden, all hardy and thrive in ordinary garden soil if given a sunny location. Blooming from July to frost, free flowering and make fine cut flowers. Annuals are hardy and best grown from seed sown in open ground in April, or they can be started earlier in

**—laevigata. CASS-3. Pkt. 20c**

doors. The foliage types can be increased from seeds planted in Aug. The perennials can be started in usual manner for perennials.

—**americana, Lilac.** CENT-1. Pkt. 10c  
(Basket Flower). Bearing solitary thistle-like flowers, often 5-in. across, 3-ft. tall, hardy annual, July-Sept.

—**White.** CENT-2. Pkt. 10c

—**argentea vera candidissima.** CENT-3. Pkt. 25c  
Hardy perennial, 1½-ft. tall, yellow flowers and silvery leaves.

—**cyaneus, Jubilee Gem.** CENT-4. Pkt. 10c  
This is a dwarf, bushy, compact plant only 1-ft. high with dark blue double flowers and especially suited for edging, very late, sturdy and to last for several seasons, flowering, hardy annual.

—**Polar Gem.** CENT-11. Pkt. 25c  
A new white variety of same habit as Jubilee Gem.

**SPECIAL STRAIN OF BACHELOR BUTTIONS.**

The flowers of this strain are large, fully double and the colors intensified. Long stems for cutting make this strain fine for florist use as well as for the garden.

—**Black Boy.** CENT-5. Pkt. 10c  
Blackish, maroon, colored flowers.

—**Blue Boy.** CENT-6. Pkt. 10c

—**Pinkie.** CENT-7. Pkt. 10c  
Deep pink.

—**Red Boy.** CENT-8. Pkt. 10c

—**Snow-Man.** CENT-9. Pkt. 10c

—**Formula Blend.** CENT-10X. Pkt. 10c  
NOTE: Each of above, oz. 60c; ¼ lb. \$2.00. Carefully hand made blend of above.

—**decalbata, Rose Delight.** CENT-12. Pkt. 15c  
Large and attractive flowers in mauve-rose pinnate foliage, very pretty, HP, 2½-ft.

—**depressa.** CENT-13. Pkt. 10c  
Pkt. 15c  
(cyanoides), syn. (Queen of the Corn flowers, dark blue, HA, 1-ft.

—**gymnocarpa.** CENT-14. Pkt. 10c  
(Dusty Miller). Finely cut silver-gray foliage, lavender flowers, used for foliage effect. Start indoors, tender annual, 1½-2-ft.

—**macrocephala.** CENT-16. Pkt. 10c  
Enormous, very double, golden flowers on 3-4-ft. plants, July-Aug., very showy, HP.

—**montana.** CENT-17. Pkt. 10c  
Large brilliant blue lace flowers resembling the annual blue Cornflower but 2" across, June-Sept., 2-3 ft., HP.

**SWEET SULTAN:**

—**moschata, Mixed.** CENT-18. Pkt. 10c  
(Sweet Sultan). Fragrant, white, yellow or purple solitary flowers, 2-in. across, often beautifully soft and fluffy, HA.

—**The Bride.** CENT-22. Pkt. 25c  
Large pure white flowers; a real charming variety, HA, 2 ft.

—**suaveolens.** CENT-19. Pkt. 10c  
(Yellow Sweet Sultan). HA, 2½-ft. tall, yellow flowers.

—**imperialis, Mixed.** CENT-15X. Pkt. 15c

(Giant Sweet Sultan). Hybrid between C. moschata and its variety alba, fragrant flowers like soft thistles, in white, rose, lilac and blue. They add beauty to the garden and are excellent cut flowers, 2½-3-ft. HA.

—**Hardy Perennial Blend.** CENT-20X. Pkt. 10c  
This blend contains only perennial species.

—**Centlaurea Blend.** CENT-21X. Pkt. 10c  
This blend contains about an equal mixture of every species and variety.

**CENTRANTHUS****(sen-TRAN-thus)**

(Or Kentranthus). Annual and perennial plants of Valerian Family, very popular in garden, flowers small, white or red, and borne in dense terminal clusters. Easily grown in border.

—**macrocephala, Mixed.** CRAN-1. Pkt. 10c  
HA pretty in masses, pink, red and white flowers, very desirable, 1-ft.

—**ruber.** CRAN-2. Pkt. 25c  
(Red Valerian or Pretty Betsy). Sweet scented, red flowers and blooms all summer, HP, 1½ ft.

—**atrococcineus.** CRAN-3. Pkt. 25c  
A dark red variety and very useful for contrast, HP, 1½ ft.

**CEDRONELLA****(see-droh-NEL-ah)**

—**triphylla.** CEDR-1. Pkt. 25c  
Tender plant; a very fragrant herb.

**CELMISIA (kel-MIS-ah)**

—**longifolia.** CELM-1. Pkt. 50c  
A very hardy mountain daisy from Tasmania; long narrow leaves, white daisies tipped with pink or mauve, 6 in., HP.

**CEPHALARIA (se-fah-LAY-ri-ah)**

Annual and perennial plants blooming from June to Aug., with flowers similar to those of Scabiosa, useful both in the border and for cut flowers; colors range from creamy-white to various yellow tints and does well in ordinary garden soil.

—**lartarica.** CEPH-1. Pkt. 25c  
Tall robust habit; flowers sulphur colored, HP, 5 ft.

**CERASTIUM (se-RAS-ti-um)**

Hardy herbaceous annuals and perennials valuable for their spreading, mat-forming habit, and attractive silvery-white foliage and showy white, star-like flowers. The effect when they are in flower, is like a snow drift which accounts for the common name of one species. May-June, 3-6 inches tall.

—**biebersteini.** CRAS-1. Pkt. 15c  
HP, white flowers, 6-in. tall, for rock garden.

**CHILOPSIS (ky-LOP-sis)**

—**linearis.** CHIL-1. Pkt. 25c  
Desert or Flowering Willow. Native of Texas to Calif. and Mexico. A deciduous shrub or tree to 20 ft. bearing narrow leaves to 1 ft. long and handsome crimped, trumpet-shaped flowers, lilac colored with 2 yellow strips inside, borne in short terminal racemes.

**CHIRITA (ki-REE-ta)**

Very rare and little-known relatives of

Gloxinia and Streptocarpus, with trumpet-shaped flowers of pink, blue, purple, or pale yellow. They should be given the same treatment as Gloxinia or Saintpaulia although it is possible that some species, coming from very high altitudes, may be fairly hardy. They should be tried by all admirers of gesneraceous plants, and will probably be useful for hybridizing, as well as for their beautiful flowers.

—**species.** CHIR-1. Pkt. 40c  
Came to us undescribed, and without name, from India, but certainly worth growing.

**CHRYSOPSIS (kris-OP-sis)**

(Golden Aster). Daisy-like plants with yellow flowers on 1-3-ft. plants, at home in the dry sunny part of wild garden. Hardy perennials.

—**falcat.** CHRY-3. Pkt. 50c  
This is recommended highly as a rock garden perennial, with silky gray foliage and pretty yellow flowers, HP, 1½ ft.

—**mariana.** CHSO-2. Pkt. 25c  
Large Aster-like flowers in a pretty rich yellow, blooming Aug.-Nov., HP, 1½ ft.

—**villosa.** CHSO-1. Pkt. 25c  
Golden Aster. Yellow flowers, 1-ft. tall, May-June.

**CIMICIFUGA (sim-i-SIF-eu-gah)**

Tall growing herbaceous perennials with long wands of very small white flowers and very useful in the back of the hardy border or semi-shaded spots in the wild garden. Belongs to the Buttercup Family; easily grown from seed and best in rich moist soil.

—**racemosa.** CJM-1. Pkt. 30c  
(Black Snakeroot, Cohosh). A hardy showy plant best in moist soil and partial shade, flowers in long racemes of white, flowering in June or July, handsome foliage, Sept. to severe frost, 4-5 ft., HP.

**CINERARIA (sin-e-RAY-ri-ah)**

(Bot. Senecio Cruentus). They are strictly greenhouse plants, altho perennials, and are grown mainly as winter flowering pot plants, new stock is grown each year. Seed is best sown April-June but also till Sept. for later flowers; soil sandy loam, containing 1/3 leaf mold. Pot up seedling as soon as large enough and keep moist and cool. Liquid manure is beneficial AFTER buds appear. Other species will be listed under Senecio, which see.

—**Hybrid gr. fl. Multiflora nana, Mixed.** CIN-1. Pkt. 50c  
Dwarf compact plants producing masses of small flowers in a showy color range in self colors. Claimed to be the best pot plant.

—**Multiflora Maxima, Berlin Market.** CIN-2. Pkt. 50c

Larger flowers and plants somewhat higher than C. multiflora nana but as rich flowering and showing the same good display of colors, 15-in. tall.

—**multiflora nana.** CIN-7. Pkt. \$1.00  
A very fine English grown strain in self colors, GP\*, 1 ft.

—**stellata.** CIN-6. Pkt. \$1.00  
Star Cineraria. Very pretty small star-shaped flowers in immense heads, colors much varied and very nice for cutting, GP\*, 3 ft.

—**grandiflora.** CIN-5. Pkt. \$1.00  
A splendid English grown strain with very large flowers and fine form, in beautiful colors, dwarf habit and compact plant; first quality in every way and unsurpassed, GP\*, 1 ft.

—**Siter's Rainbow Mixed.** CIN-3. Pkt. 50c  
Hybrid gr. fl. large flower heads on compact plants in a lovely color range.

—**maritime, Diamond.** CIN-4. Pkt. 25c  
NOTE: Greenhouse growers.

The Cinerarias marked GP\* are all of the very highest quality for greenhouse growing; and cannot be excelled; and as soon as seed can be gotten through from Germany, we also expect to have some of the finest strains grown there.

**CIRSIIUM (SUR-si-um)**

Plumed Thistle. Rank growing prickly plants with purple, yellow, and white flowers in heads; easily grown and useful for bold effect in the wild garden.

—**occidentale.** CIRS-1. Pkt. 30c  
Pure silver foliage and scarlet flowers; a beautiful subject; full sun in gritty, stony neutral soils, 2 ft., HP.

—**candidissima.** CIRS-2. Pkt. 50c

**CISTUS (SIS-tus)**

Rock Rose. Low upright shrubs native of the Med. region, belonging to the Rock Rose Family. Bears a profusion of showy flowers but hardy only up to the central South; grown in full sun, dry light soil with lime present. The flowers are like large single roses; start plants in pots and transplant when young and do not prune much.

—**ladaniferus.** CIST-1. Pkt. 40c  
Gum Cistus. Well known beautiful shrub, white-purple spots, HSH, 3 ft.

**CLARKIA (KLAHR-ki-ah)**

(Rocky Mountain Garland). Easily grown hardy annual, sunny locations and any light garden soil and produces graceful showy flowers in delicate rose or purple. Growing 2-ft. tall it is very good for mass plantings, July-Aug. If flowers are cut in bud they last an extra long time. Clarkia is also valuable as a greenhouse flower. Best to plant seeds close to first of May, where plants are to grow, the seed can be started as early as Jan. indoors, setting plants out 9-12-in. apart.

**C. ELEGANS:**

The commonly grown species, has smooth reddish stems and grows under favorable conditions as high as 3 ft., and more under glass. Many new varieties are being introduced both double and single, hardy annuals.

—**Enchantress.** CLAR-3. Pkt. 20c  
Double salmon-pink, large pretty flowers.

—**Firebrand.** CLAR-4. Pkt. 20c  
A brilliant copper-scarlet variety.

—**Gloriosa.** CLAR-5. Pkt. 20c  
A distinct break in color, a bright crimson.

—**Illumination.** CLAR-6. Pkt. 20c  
An outstanding variety, flowers orange mingled with rose.

—**Mrs. Langtry.** CLAR-7. Pkt. 20c  
Very popular variety.

—**Orange King.** CLAR-8. Pkt. 20c  
Bright orange-scarlet, brighter than Vesuvius.

—**Purple Prince.** CLAR-9. Pkt. 20c  
Fine rich purple flowers, very double, EXTRA.

—**Rosy Morn.** CLAR-10. Pkt. 20c

—**Double Mixed.** CLAR-1. Pkt. 10c

—**Salmon Queen.** CLAR-11. Pkt. 20c  
A very pretty double salmon-rose variety.

—**Scarlet Queen.** CLAR-12. Pkt. 20c  
Most brilliant double variety, either for (Spike Flower). Easily grown from seeds beds or for cutting.

This species has smooth reddish stems growing 3-ft. tall. Colors salmon, crimson, purple, scarlet and white. Most popular.

—**pulchella, alba.** CLAR-2. Pkt. 10c  
Lower growing than C. Elegans, and more slender leaves. This is a white variety.

**CLEMATIS (KLEM-ah-tis)**

Herbaceous perennial or woody climbing plants of the Buttercup Family, found all over the temperate region. Thrive in rich loamy soil on alkaline side—add lime—and they respond to an annual dressing of rotted manure. There are many kinds and all are of ornamental value, the vines being especially good on fences, arbors, porches, etc. Prune those that flower on last year's wood, after they flower and those that flower from young basal shoots should be cut back to the ground each spring.

—**alpina.** CLEM-8. Pkt. 25c  
(Astragale alpina). A very conservative little climber, only 3-4 ft. long with half open 4-petaled flowers of light blue in early spring; fine for trailer in rock garden, very rare and choice, 3 ft., HP.

—**columbianum.** CLEM-2. Pkt. 25c  
Try this trailing purple Clematis with vine Honeysuckle (Lonicera Ciliosa) on a shaded wall 10-ft., June.

We have a small amount of berries of Lonicera ciliosa, at 30c per packet while they last.

—**crispa.** CLEM-10. Pkt. 20c  
Grows well in damp places. Climber, HP.

—**douglasii.** CLEM-1. Pkt. 25c  
Urn-flowered Clematis. Blue flowers, 1-2 ft. tall.

—**lingusticifolia.** CLEM-9. Pkt. 25c

—**montana.** CLEM-4. Pkt. 25c  
A vigorous grower, having fragrant white anemone-like flowers in May and June; easily grown from seed.

—**pitcheri.** CLEM-5. Pkt. 25c  
Downy stalks; likes to ramble over bushes or a tall stump, 8-10 ft., HPCL.

—**siberica alba.** CLEM-5. Pkt. 35c  
A low climber with large 4-petaled bell-like flowers of white, very early in Spring; will climb over dwarf shrubs or can be allowed to trail over ledges in the rock garden, 6 ft., HP.

—**scottii.** CLEM-7. Pkt. 40c  
An erect herbaceous shrub with profusion of deep purple tubular or bell-shaped pendant flowers, rock garden or border, 2 ft., HP.

—**spooneri rosea.** CLEM-6. Pkt. 40c  
Rampant climber, a proportion coming white from seed, HP.

**CLEOME (klee-OH-me)**

(Spiked Flower). Easily grown from seeds in May, which germinate quickly. Thin plants to 2-ft. apart, height 4-5-ft., best as border subject and most desirable flower for bold clumps of color in the background planting. June to frost; may be also used as a hedge.

—**Great Pink.** CLEO-1. Pkt. 15c  
Flowers rich rose not turning to white; easy culture and blooms for months, 5-ft.

—**Pink Queen.** CLEO-2. Pkt. 10c  
Clear soft pink and as flowers age turn to a pleasing apple blossom color, very attractive.

—**scottii.** CLEO-3. Pkt. 10c  
Clear soft pink and as flowers age turn to a pleasing apple blossom color, very attractive.

**CLERODENDRON****(klee-roh-DEN-dron)**

Glorybower. Most of these can be grown only in the greenhouse or outdoors only in the warmer sections, only a few can be grown in the North with some protection. Deciduous or evergreen trees or shrubs; they come from the tropics.

Seed should be sown singly in small pots, in a mixture of equal parts leaf mold or peat and sharp sand; kept moist in a temperature of about 70 degrees; when repotted soil should also contain some well rotted manure.

—**squamatum.** CLER-1. Pkt. 35c  
This comes from India and we are sorry not to have a proper description.

**CLIVIA (KLY-vi-ah)**

Fleshy-rooted evergreen plants of Amaryllis Family, grown in N. as house plants, in S. in shady places outdoors; they are very pretty pot or tub plants, grow in rich heavy soil and kept moist at all times. Will stand 10 degrees of frost.

—**miniata.** CLIV-1. Pkt. 50c  
Seeds cost 10c each; umbels of salmon-orange flowers fading to light yellow in center, free flowering and attractive.

—**Hybrids.** CLIV-2. Pkt. 50c  
Five seeds to packet; hybrids, they multiply rapidly and soon from large clumps.

—**Belgian Hybrids.** CLIV-4. Pkt. 50c  
Seeds 25c each.

Flowers mostly deep orange fading reddish; very attractive type, even out of bloom, leaves dark green and 3' wide.

—**Zimmerman's Hybrids.** CLIV-



- New Gold.** CORE-1. Pkt. 10c  
100% double strain. Flowers are large and fluffy, of rich golden yellow with long stems, making them ideal for cutting, 2½-ft.
- Double Sunburst.** CORE-2. Pkt. 10c  
Flowers 1½-2-in. across, beautiful golden yellow, long lasting, comes about 80% double, excellent for cutting.
- Mayfield Giant.** CORE-3. Pkt. 10c  
Large golden yellow on a very vigorous plant, longer and stouter stems and ray petals broader.
- pubescens superba.** CORE-4. Pkt. 20c  
A very fine growing species with large yellow flowers with a dark blotch in the center, HP, 3 ft.
- Mixed.** CORE-4X. Pkt. 10c; ½ oz. 30c

## CORN—ORNAMENTAL

- Bassett's Indian Corn.** CORN-1.  
Pkt. 20c; ½ lb. 50c  
This strain is the brightest and contains the largest number of colors and combinations of any strain we have ever seen. The ears are of the flint corn type, long, 10-12 rows; the kernels large flint type with all the colors of the rainbow, often as many as 10 different colors on a single ear. Colors: bright yellow, white, cream, all shades of red imaginable, blues, strawberry, even green, and these colors also in combination on one kernel. This corn is highly ornamental and used as decorations in many ways, the kernels also supplying a wide variety of colors for design work on ornamental dishes, plates, etc. Harvest the ears promptly when ripe, pulling husks back neatly and hanging them up to dry in a clean, shady, dustless place.

- Strawberry Pop Corn.** CORN-2.  
Pkt. 15c; ½ oz. 25c  
A small red ear pop corn, just about the shape of a large strawberry and in a rich deep wine red color. It is very ornamental and can also be used for pop corn. Our strain will definitely come true from seed. The husks can be folded back when picked and the corn dried thus.

## CORTADERIA

- (kor-ta-DEE-ri-ah)**  
Ornamental grasses, sometimes classed as Cynerium, the two genera being much alike except for the flower details. They thrive in rich light sandy soils. They are not hardy in the far North, and it is best to start them indoors and transplant out after frost danger is passed. Called Pampas Grass.
- argenteum.** CORT-1. Pkt. 15c;  
Pampas Grass. Showiest of ornamental grasses with long silky plumes in late summer, lasting for weeks; can be cut and dried for winter use as soon as they are fully developed.
- roseum.** CORT-2. Pkt. 15c  
½ oz. 25c  
Same but with pretty rose tinted plumes.

## CORYDALIS (koh-RID-al-is)

- Easily grown annuals and perennials having interesting flowers similar to those of the Bleeding Heart; in yellow, blue, purple or rose.
- lutea.** CORY-1. Pkt. 20c  
**diphylia.** CORY-2. Pkt. 25c

## COSMOS (KOS-mos)

- Tall half hardy annuals, very easily grown from seeds sown late in April or they can be started indoors. They thrive even in poor soil and require a sunny location; thin plants to 2-ft. apart and when a height of 2-in. is reached in the seedlings pinch off the tops so as to induce side branching.

## BIPINNATUS:

- Sensation Radiance.** COS-1. Pkt. 20c;  
½ oz. \$1.25  
Top award winner for 1948, a striking new color combination never before seen in Cosmos. Deep rose petals overlaid with a large well defined zone of rich crimson. This should be in every flower garden this year.

- Sensation Dazzler.** COS-14. Pkt. 15c  
A pretty crimson variety, 40 inches tall.
- Sensation, Mixed.** COS-2X. Pkt. 10c  
Contains all the Sensation type varieties, rose pink, crimson, white and Radiance.

## TRUE EARLY FLOWERING SINGLE

### MAMMOTH STRAIN:

- (Superior Garden Strain)**
- Crimson Queen.** COS-5. Pkt. 15c;  
**Rose Queen.** COS-4. Pkt. 15c;  
½ oz. 45c
- White Queen.** COS-3. Pkt. 15c;  
½ oz. 45c
- Mixed Queen.** COS-6X. Pkt. 15c;  
½ oz. 45c
- hybrid Orange Flare.** COS-12. Pkt. 15c  
½ oz. 45c  
Vivid orange, blooms in 99 days, 2½-ft. plants.

## HYBRID VARIETIES:

- hybrid Orange Ruffles.** COS-10.  
Pkt. 15c  
Double, vivid rich orange butterfly-like semi-double blooms, vary free flowering.
- hybrid, Yellow Flare.** COS-11. Pkt. 15c  
Bright clear yellow, a brand new shade in Cosmos, flowers single 2-2½-in. across, on 3-ft. plants.
- Double Crested, Mixed.** COS-8.  
Pkt. 20c  
Extra early, with double crested flowers.
- Late Mammoth Single Mixed.** COS-7.  
Pkt. 10c
- Double Mixed.** COS-13X. Pkt. 15c
- Peerless, Double Mixed.** COS-9.  
Pkt. 15c  
Eight wide petals with a Bachelor-button-like center, a beautiful blend containing crested and fluted type flowers.

## COSTUS (KOS-tus)

- Tropical plants related to Hedychium, with leaves that assume rich coloring when grown in heat, the flowers themselves are not very showy but the sterile stamens are bell-shaped and of large size, making a remarkable display. They like rich moist gravelly soil in partial shade and must be grown under glass in the North.

- speciosus.** COST-1. Pkt. 50c  
A tall growing species, upright, somewhat woody at base, with narrow foot-long leaves, silky beneath, above red bracts are borne the large flowers with bell-shaped stamens nearly 4 inches across, white with yellowish center, grows to 10 ft.

## COTONEASTER

### (koh-toh-ne-AS-ter)

Deciduous or evergreen shrubs of temperate zone, mostly from China, belonging to Rose Family. They are very ornamental and while a little tender in the N. they stand the winters well in the central states without protection. They can be grown in pots at the start until ready to be set out in their permanent locations. Sunny locations and well drained soil.

- acuminata.** COTN-1. Pkt. 25c  
**microphylla.** COTN-2. Pkt. 25c  
Dwarf, evergreen type, spreading habit with white flowers.
- rotundifolia.** COTN-3. Pkt. 25c  
**frigida.** COTN-4. Pkt. 25c  
One of the most beautiful in flower and fruit; grows to 20 ft., not hardy in North.

## CROCUS (CRO-cus)

While Crocus are generally grown from corms, they can also be grown, with much interest, from seed, and especially many of the rarer specimens. There is also the pleasure of hybridizing. Plant the seeds in flats or pots where they can be started under the best conditions and grown on for a time in the cold frame and then later the small corms can be planted to their permanent beds.

- Species Mixed.** CROC-1. Pkt. 30c  
An English garden strain containing many different species.
- Tommasinianus.** CROC-2. Pkt. 30c  
A beautiful pale bluish-lavender.

## CROTALARIA

### (kroh-tah-LAY-ri-ah)

(Rattlebox). Herbs and shrubs having Sweet Pea-like flowers and swollen pods. Best grown from seeds which must be soaked in warm water.

- alata.** CROT-2. Pkt. 30c  
Mottled bronzy leaves and rose-pink flowers followed by brilliant red "May Apples." From the Himalayas, but fully hardy in the N. and happy in light shade. For a choice spot in the woodland or shaded rock garden, 1 ft. HP.

- refusa.** CROT-2. Pkt. 20c  
(Golden Sweet Pea). Showy annual bush plant with many upright, spire-like spikes of glossy golden yellow pea-like flowers, marked bronze-brown on wing reverses.

## CRATAEGUS (krah-TEE-gus)

- Hawthorn or Thornapple. Member of the Rose Family, nearly all hardy and they make the finest specimen trees and shrubs for the lawn. Nearly all of them come true from seed and are easily grown; the seed germinates slowly and should be sown in a flat or pot and placed
- coccinea.** CRAT-2. Pkt. 35c  
Dark glossy leaves and large scarlet fruits, HT, 15 ft.
- crus-gallii.** CRAT-1. Pkt. 35c  
Cockspur Thorn. White flowers tinged with red. HT, 10 ft. or more.

## CREPIS (KRE-pis)

- Hawksbeard. Flowers are in yellow, red or orange flower heads; grown in the border and thrive in a light loam and in full sun.
- glomerata.** CREP-1. Pkt. 20c  
Flowers arranged on large, stout conical heads, flowers yellow with 4-petaled black anthers 6-10" high; found at 10-13,000 ft. elevations.

## CRAWFURDIA

Climbing gentians from the temperate regions of the Himalayas, not fully hardy and best grown, in the North, in cool house or window garden. They seem fully hardy on the West Coast, but are little known in cultivation. Treat like Gentians, giving cool soil rich in humus, plenty of water. Seed is slow of germination. Flowers are gentian-like, tubular or funnel-shaped, in blue and violet with showy fleshy red fruits.

- speciosa.** CRAW-1. Pkt. 35c  
Regarded by one of the Asiatic plant collectors as the best of the genus; has large blue or purple funnel-shaped flowers and is one of the hardiest. Twinning vine, HHP.

- japonica.** CRAW-2. Pkt. 35c  
Flowers are dull greenish or yellowish, but the fleshy red fruits are particularly ornamental; vine, HHP.

## CREMANTHODIUM

- thomsonii.** CREM-1. Pkt. 25c  
Lemon-yellow flowers, 1¼" across.

## CRINUM (KRY-num)

Fragrant bulbous plants, leaves thick and strap-like; they are easily grown in the S. in the open, but in the N. are not so popular as they stand little frost, they can be grown in tubs. They stand considerable neglect.

- asiaticum.** CRIN-2. Seeds 25c each  
**moorei.** CRIN-1. Seeds 15c each

## CRUCIANELLA

### (kroo-shan-EL-ah)

(Crosswort). Annual and perennial plants, many of which are grown in the rock garden.

- stylosa.** CRUC-1. Pkt. 20c  
Rock garden plant, in light soil and partial shade, while a perennial it is usually grown as an annual; prostrate habit and light growth, bearing round heads of small deep pink flowers.

## CRYPTANTHE (krip-TAN-the)

(Cryptantha). Slender plants of the Forget-me-not Family, annual and perennial, with racemes of yellow or white Forget-me-not flowers; not common in American gardens. They are suitable for sandy, sunny exposures in the rock garden.

- sheldonii.** CRYP-1. Pkt. 30c  
This comes to us from India and we are sorry not to have any exact description, but it is recommended.

## CUPHEA (KEU-fe-ah)

Tropical and sub-tropical plants grown mostly in greenhouses in the N. and outdoors in the S. Easily grown from seed as tender annuals.

- Butterfly Hybrids.** CUP-1. Pkt. 15c  
At a distance the plants seem to be covered with gay fluttering butterflies. Colors lavender, white, lilac, rose, pure pink, rose purple, crimson and the most intense fire scarlet; this is one of the better annuals, 2-ft.
- lanceolata.** CUP-2. Pkt. 15c

Quite different from the Hybrid, flowers having two upper petals of velvety black maroon and the four smaller lower petals of bright crimson; a very attractive annual.

- miniata Vermilion.** CUP-3. Pkt. 15c

## CURCULIGO (kur-KEL-li-goh)

Tropical plants of the Amaryllis Family. Palm-like dwarf plants and very useful plants in the warm greenhouse, standing dense shade; thrive in mixture of fibrous loam, old cow manure and sand.

- capitata.** CURC-1. Pkt. 50c  
Formerly *C. recurvata*. Dark green leaves 3 ft. long; the most popular species and makes fine pot plants, of palm-like appearance.

## CYANANTHUS

Himalayan plants of the Bellflower Family having frail, almost prostrate stems, tiny leaves and in late summer quite large cup-flowers, each with five spoon-shaped lobes. Mostly blue with a few less desirable yellow species. They like cool rich soil, in half shade, in the East. Fleshy rooted, they die down entirely in the winter and start growth in late spring. Not difficult when once established but often fail to come thru the first winter especially if transplanted while small, best left in the seed-pot for at least a year; a wonderful rock garden plant for northern gardens.

- lobatus.** CYAN-1. Pkt. 50c  
One of the best with quite large blue flowers at the end of 6 inch, nearly prostrate stems set with tiny triangular leaves

## CYCLAMEN (SIK-lah-men)

The large flowered Cyclamen of the florists is *C. persicum*. It requires 15-18 months from seed. It is strictly a greenhouse flower.

- europaeum.** CYCL-1. Pkt. 40c  
Small rose-purple flowered species, it blooms in Aug. in rock gardens and is hardy even in Canada.

- neapolitanum album.** CYCL-2. Pkt. 50c  
Red-purple and white, autumn flowering and a good hardy species, HP, 4 inches.

**C. persicum giganteum:**  
These are the greenhouse Cyclamen. The strains and varieties we offer are the very best and most reliable.

- Bonfire.** CYCL-4. Pkt. 50c  
Orange-scarlet.
- Salmon King.** CYCL-5. Pkt. 50c  
A grand novelty, lovely deep salmon flowers.

- White Wonder.** CYCL-6. Pkt. 50c  
The largest and most free flowering white variety yet produced.

- amabile, Pink.** CYNO-1. Pkt. 10c  
(Chinese For-Get-Me-Not). A pretty pink flowered variety in this hardy annual, 2-ft.

- furcatum.** CYNO-4. Pkt. 20c  
Hairly leaved, 1-3 ft. high with numerous blue Forget-me-nots in clusters; perennial.

- linifolium.** CYNO-5. Pkt. 20c  
Upright sprays of white Forget-me-nots like little pearl buttons; an easy annual for sunny locations, Venus' Navelwort.

## CYPRIPEDIUM

### (sip-ri-PEE-di-um)

The Lady Slipper Orchid, including some of our loveliest wild orchids, as well as very beautiful greenhouse species. The latter are among the most easily grown of all orchids and are particularly suited to culture by the amateur. As with all orchids, careful attention must be given to the young seedlings, but once started their demands are less exacting. See Orchids.

- cordigerum.** CYPR-5. Pkt. 50c  
**insigne.** CYPR-1. Pkt. 75c  
One of the finest of the greenhouse sorts, with brown to clear yellow flowers; very free blooming.

- insigne x Fairreanum.** CYPR-2.  
Pkt. 75c  
A hybrid between the two species, the latter from Assam which has rather small flowers with purple veined white sepals and green lip, flushed red and veined purple. Interesting variations may be expected among the seedlings. Greenhouse culture.

- villosum.** CYPR-3. Pkt. 75c  
Very glossy brown flowers, purple at base, edged with white; greenhouse culture.
- giganteum.** CYPR-4. Pkt. 75c

## CYTISUS (SIT-i-sus)

Broom. Attractive shrubs belonging to Pea family. Some are hardy in N; require full sun exposure and wind, preferring poor soil and perfect drainage.

- "Porlock".** CYTS-1. Pkt. 50c  
Hybrid of *C. fragrans* x *C. monspessulanus*; golden flowers and very fragrant; large shrub in mild climates, standing up to 10 degrees of frost.

## DABOECIA (da-boh-EE-si-ah)

In a cool cellar or cold frame, where germination takes place in the spring of the second year, sometimes the third. The seed should be rubbed free of the pulp. This may sound difficult but if placed in a corner of the cold frame, the pot plunged to its top and covered with glass, it is easy.

- polifolia alba.** DAB-1. Pkt. 30c  
The Connemara Heath. This is a white form, HSh, 2 ft.

## DAHLIA (DAL-yah)

Growing Dahlias from seed is interesting and fascinating, the surprise of new colors and forms makes it a very popular flower grown from seeds. If seed is planted early indoors, flowers can even be had the first summer, and in most cases even from seed planted outdoors the middle of May. Set plants in the garden when all chance of frost is past, about 2-3 ft. apart. The strains we offer are of the highest variety. Both American and European seed is now offered. Of course, the tubers should be lifted early in the fall and stored indoors till spring.

- Cactus Hybrids.** DAHL-1. Pkt. 20c  
True cactus formed flowers, seed saved from a European exhibition collection.

- Collarette Hybrids.** DAHL-5. Pkt. 25c  
This is a Dobbie strain grown for us in England, very highly recommended and containing a great range of colors, 3 ft.

- Coltness Hybrids.** DAHL-7. Pkt. 25c  
A T&M English grown strain, an excellent strain of this compact growing Dahlia.

- Coltness Hybrids.** DAHL-2. Pkt. 15c  
A lovely new form of the dwarf single type which blooms in 4 months from seed, 1½-ft. tall.

# DELPHINIUM

Under this heading are listed the perennial species; the annuals are listed under Larkspur. Delphiniums are probably our most popular flowers. They really are very easily grown; fine plants require air circulation, light alkaline soil and good seed strains. Locate in the garden so that they have some protection from the strong winds, give space between plants, not closer than 2-ft., and if you want them for cut flowers only, plant in 3-ft. rows, with plants 2-2½-ft. apart in the row. A light sprinkling of agricultural lime, with well rotted manure is best for the soil; after plants have become established a mulch over the soil is fine. Usually the plants can be cut back after flowering and a second bloom will result, a light dressing of well rotted manure at this time will benefit the plants. The best time to plant seed is about Aug. 1st, when new crop seed can be had and the plants will reach sufficient size to make the proper size for blooming the following summer; however, seed can be sown anytime from early spring to Sept. The handling of the seedlings and plants is the same as with any regular sowing. You will find that the varieties and strains of those we offer are the very best obtainable, regardless of the price. Those using quantities of seed for plants, etc., should write us for quantity quotations, which will depend upon time of ordering and available seed supply; it will pay you to ask.

## PLANTING DELPHINIUM SEED IN THE SPRING:

Germination can be gotten from early planted seed, Feb.-April, if you will place the seed, as soon as received, in the freezing compartment of your refrigerator for 4-6 days and then plant immediately. Prepare the soil carefully, water it well, and let stand, during this period, so that the seed can be immediately started on their mission. As a rule 5-6 inch pots are best as you are not as liable to wash seeds all around as is the case with flats. Keep glass over them but ventilate well and remove condensation daily. Remove glass immediately when germination starts. Delphiniums germinate best in the dark (cover the glass with paper) and in cool temperature, about 50 degrees.

## PACIFIC GIANT SERIES:

(Vetterle & Reinelt Original Seed)  
One of the most popular strains at present having immense spikes 2½-3½-in. with flowers closely set which does not scatter after cutting. They come about 65% mildew resistant and 100% double; a truly remarkable strain.

- Prices on all series: Pkt. 35c; 3 pkts. 100c;  
½ Oz. \$3.50; ½ Oz. \$6.50; Oz. \$10.00**

- Black Knight Series.** DELP-1. Pkt. 35c  
The darkest violet. Individual flowers 2½-3 inches in diameter; of beautiful round form, with heavy velvety texture, which gives the color luminosity and vividness not seen before in Delphinium. Very long, well-formed spikes; a true show flower with black bees.

- Blue Bird Series.** DELP-2. Pkt. 35c  
A true blue Delphinium has been the hardest thing to produce. We can safely recommend this series as being the clearest medium blues, with white bees. They not only come true to color but carry well-formed, round flowers 2½-in. in diameter, on very long, graceful spikes. The habit is all one could desire in modern Delphinium and this series sets a new standard in blues of today.

- Blue Jay Series.** DELP-3. Pkt. 35c  
The color is striking, clear medium to dark blue; very intense and alive, with dark, contrasting bee.

- Camellard Series.** DELP-4. Pkt. 35c  
A clear lavender self with white bee, possessing classical perfection of form of the individual flowers, which are very round and attain very large size, averaging 3-inches in diameter. Beautifully balanced spikes, combined with excellent growing habits.

- Galahad Series.** DELP-5. Pkt. 35c  
The greatest achievement in giant whites, fully worthy of its name, which possesses all the qualities one expects to find in a fine Delphinium. The standard attained in this series is perhaps responsible for the wide popularity it met, ranking in demand next to the blues. The clear white flowers with white bees, are of large size, reaching often 3-in. in diameter, combined with glistening, heavy texture.

- Guinevere Series.** DELP-6. Pkt. 35c  
A clear, pink-lavender self with white bee; with very large individual flowers averaging up to 3-in. in diameter. This is a true exhibition type and a beautiful garden plant.

- King Arthur Series.** DELP-7. Pkt. 35c  
This is still one of the most brilliant Delphiniums so far developed. The color is a rich, royal purple, with a velvety texture and large white bee, and the beautifully formed, long spikes are carried on thin, woody stems.

- Percival Series.** DELP-20. Pkt. 35c  
Companion to Galahad Series; large glistening white flowers with strongly contrasting black bees, beautifully spaced on

- Coltness Yellow.** DAHL-6. Pkt. 25c  
An indispensable strain for bedding, single yellow flowers, 1½ ft.

- Dwarf Hybrids.** DAHL-4. Pkt. 25c  
Greatly improved Unwin type; we believe this to be the best strain of Dwarf Dahlias obtainable. Few blooms measure less than 3-in. and on 12-in. stems, profusely borne the first year. Some lovely new colors are: shades of canary yellow, scarlet, terre cotta, apricot, crimson, lavender, pink, purple, maroon, buff, cream, white, etc.

- Giant Flowering.** DAHL-3. Pkt. 15c  
Giant flowers, the seed saved from an exhibition collection.

- Mignon.** DAHL-8. Pkt. 25c  
Very large single flowers in bright colors, 1½ ft.

- Paeony-flowered.** DAHL-9. Pkt. 25c  
Double and semi-double flowers in enormous size, an English grown strain.

- Unwin's Dwarf.** DAHL-10. Pkt. 30c  
Reselected and improved English strain having semi-double flowers, 2 ft.

## DAPHNE (DAF-nee)

- Small deciduous or evergreen shrubs, especially valued for their fragrant flowers; thriving best in well drained sandy soil, well supplied with leaf mold. Not all hardy in N.; some grown in greenhouses.
- eleoides.** DAPH-1. Pkt. 25c

long, tapering spikes. Very vigorous, free growing habit.

**Round Table Series.** DELP-9. Pkt. 35c  
As the name implies, this represents all of the color combinations of the Knights and their Ladies which will eventually be introduced. This year some three hundred different crosses were used to make up this group, combining all the newest color developments and possessing size that will make them invaluable for show purposes.

**Summer Skies.** DELP-8. Pkt. 35c  
Light, heavenly blue of a summer sky with white bees representing the fleecy clouds; a color long sought in the large hybrid Delphinium. The 1947 series has reached stability where they come almost 100% true to color from seed. As a class this is the finest blue Delphinium today in existence.

**Saier Series Blend.** DELP-10. Pkt. 35c  
A carefully hand made blend of the above series, not a mixture, especially of value to the flower grower with limited space.

## SERIES MIXTURE

**Series Mixture.** DELP-11X. Pkt. 25c;  
½ oz. \$2.00

Contains most of the series, but based mainly on surplus. Quality exactly the same as above.

**NOTE:** Those wanting first delivery in July or Aug. on new crop seed should book their orders as early as possible. The 1947 crop was the poorest in our experience, very late, with the seed actually dribbling in. It was most unsatisfactory.

The following Belledonna types of Delphinium, while not as large as the Pacific Giant Strains, they, however, are much to be preferred in those sections where the summers are hotter and not so moist. They will, in these sections succeed where the others will fail. One will just have to try them out in his own particular garden and treatment. More resistant to disease.

- belladonna, True.** DELP-12. Pkt. 20c;  
½ oz. \$1.00

- Lovely clear blue.**  
**Belladonna Improved.** DELP-23.  
Pkt. 25c

Special Strain. Clear light blue, large flower, strong grower; the finest strain of Belladonna on the market.

- Azure Fairy.** DELP-21. Pkt. 25c  
Dwarf chinensis, azure blue, 12".

- Blue Butterfly, Improved.** DELP-22.  
Pkt. 25c

Dwarf chinensis variety, ultramarine blue, 12".

- Blue Grotto.** DELP-18. Pkt. 35c  
A deep indigo-blue variety, early, English grown, HP, 3 ft.

- Cambridge Blue.** DELP-25. Pkt. 25c  
Special strain in a rich belladonna blue.

- Cliveden Beauty.** DELP-13. Pkt. 20c;  
½ oz. \$1.50

A lovely turquoise blue, a good florist strain too.

- Dark Blue.** DELP-27. Pkt. 25c  
**White.** DELP-26. Pkt. 25c



## DAUBENTONIA

(daw-ben-TOHN-ya)

Herbs and shrubs of the Pea Family with leaves divided into many pairs of small leaflets. The pea flowers are borne in loose racemes, and range in color from white to yellow, red-purple, and orange-red. Require indoor culture in the North, and are rather short-lived.

—lexana. DAUB-1. Pkt. 25c

## CYNOGLOSSUM

(sin-oh-GLOS-um)

(Hound's Tongue). Sp. called from the shape of their leaves. Annuals and biennials.

## DENDROBIUM

(den-DROH-bi-um)

Epiphytic orchids, tropical, having long drooping racemes of showy flowers in shades of rosy purple and mauve, white or pale green and having a sac or spur and a lip. There are a great many species and some very popular for greenhouse growing. Divided into evergreens and deciduous, the former requiring a moist warm atmosphere; the latter a high moist atmosphere during the growing season but cooler and drier care during the late fall, winter and early spring. See Orchids.

—fimbriatum oculatum. DEDR-1. Pkt. 90c

Brilliant orange-yellow, with rich red-brown spot on the fimbriated lip; flowers 2-3 inches across, in pendulous racemes of 6-12 blooms; deciduous and a very easy species for the amateur.

—nobile. DEDR-2. Pkt. 90c

A very free blooming species with large purple-tipped white flowers.

## DESMODIUM (des-MOH-di-um)

Tick-trefoil or Tick-clover. Grows in dry woods and fields and may be used in the border or wild garden. Pea Family.

—gyrans. DMOD-1. Pkt. 35c

Telegraph Plant. Grown in the greenhouse, a tender Asiatic species with purple flowers; its leaflets have the power to move in several directions; perennial grown as an annual, easy from seed.

## DEUTZIA (DEUT-si-ah)

Deciduous shrubs from Asia, saxifrage family. Very attractive shrubs, growing best in good, well drained loam; not real hardy in the North.

—corymbosa. DEUT-1. Pkt. 25c

## DICENTRA (dy-SEN-trah)

Correct name for Dielytra, former name for Bleeding Heart. Charming hardy, long lived perennials; foliage fern-like, flowers dainty heart-shaped with spurred petals usually rose or pink and sometimes yellow. Easily grown from seed.

—oregona. DICN-2. Pkt. \$1.00

Very rare and only a small supply; much more showy than D. uniflora.

—spectabilis. DICN-2. Pkt. 50c

Bleeding Heart. Formally listed as Dielytra.

## DICRANOSTIGMA

Plants of the Poppy Family, with handsome rosettes of basal leaves, and tall branching stems, bearing many poppy-like flowers. They do best in light loamy soil.

—franchetianum. DICR-1. Pkt. 20c

A tall-growing species, with 3-inch single poppies of clear deep yellow; under glass it will flower the first season. HB. 6-ft.

## DICTAMNUS (dik-TAM-nus)

The Gas Plant, a favorite in old gardens. It makes huge clumps, with finely divided leaves and racemes of good-sized showy flowers, white or rose, with strong lemon fragrance. On still sultry evenings there will be a flash of light if a match is held close to the flower cluster. It is easy to grow, preferring a rather heavy rich soil, and resents disturbance. Seeds are slow to germinate.

—fraxinella. DICT-1. Pkt. 25c

Burning Bush. Rosy purple flowers; a good border plant, resents transplanting. Seed germinate very slowly, planting them usually in the fall, an inch deep, they germinate in the spring; the plant gives off a volatile vapor.

—albus. DICT-2. Pkt. 25c

A white flowered variety.

## DICRANOSTIGMA

—franchetianum. DICR-1T. Pkt. 25c

Deep yellow single flowers, HB, 6 ft.

## LIDISCUS (di-DIS-kus)

—caeruleus. DIDI-1. Pkt. 10c

BLUE LACE FLOWER. Now botanically Trachymene (tray-ke-MEE-nee). Dainty lavender and blue annual, flowers in flat head at the end of 2½-ft. stems; excellent for cutting, sow seeds early.

## DIGITALIS (dij-i-TAY-lis)

FOX GLOVE. Erect biennial and perennial plants. Their stately spikes on steps 3-ft. or more high are crowded with thimble-like flowers, beautifully spotted. They are easily grown from seed sown in the spring or summer for flowers following season.

—ambigua. DIG-3. Pkt. 30c

Spikes of yellow flowers and a good perennial species (Syn. grandiflora), HP, 3 ft.

—laevigata. DIG-4. Pkt. 30c

A very pretty Foxglove with bronzy-yellow flowers and whitish lip, HP, 3 ft.

—jutea. DIG-5. Pkt. 50c

A rare and attractive yellow flowered Foxglove, HP, 3 ft.

—mariana. DIG-6. Pkt. 40c

A distinct species with white flowers overlaid with golden chestnut, HP, 3 ft.

—maculata superba. DIG-7. Pkt. 30c

Giant spotted plants in a beautiful mixture English grown strain, HP, 3 ft.

—purpurea gloxiniaeflora. The Shirley. DIG-1. Pkt. 15c

Giant hybrid with blotched throat, extra color range, white to shell pink to deep rose, many nicely blotched or spotted with crimson, maroon or chocolate, largest flower spikes, 6-ft.

—Finest Mixed. DIG-2. Pkt. 15c

Spotted throats, extra fine.

—thaspi. DIG-8. Pkt. 50c

A dwarf species with crimson flowers and pale throat marked with blood-red dots, HP, 1½ ft.

## DIANTHUS - PINKS

In this classification are a great number of annuals and perennials all low growing and known under different names, viz., Carnations Pinks, Sweet Williams, Picotees, etc. They are all fragrant and beautiful flowering plants and excepting for a few Alpine species, they all can be grown anywhere, enjoying sun and a moist garden soil. The annual sorts should be planted early in the spring, either indoors or out, the perennials can be started indoors early in the spring, or sown as late as Aug., for plants old enough to winter over when they will flower profusely the following summer. Do not mulch Dianthus during the winter, they are best left alone as the crowns often rot if too much moisture collects and they can not quickly dry out.

—allwoodi. DIAN-1. Pkt. 25c

A hardy hybrid race of D. plumarius and D. caryophyllus. Flowers from early spring till late fall in all colors except yellow; petals entire or variously fringed; have the free flowering and clove scent of the plumarius with the heavy texture of the carnations. About 25 seeds per packet. 5 for \$1.00.

—alpinus. DIAN-2. Pkt. 20c;

Flowers first year from seed, July-Aug.; preters lime soil, fragrant, flowers single, in shades of lavender, rose and pink and in many different colored centers, 4-8-in. tall.

—arenarius. DIAN-3. Pkt. 20c

Deeply fringed and richly fragrant rock garden species, white, cream and pale pink flowers; has sweet fragrance found in all Dianthus, very desirable, 6-in. tall.

—caesius, gr. fl. DIAN-16. Pkt. 15c

(Cheddar Pinks). Tufted flowers, 3-in. tall, 6-in. flower stems, bright pink daintily fringed flowers in May and June; ideal rock garden plant.

—Hybrid. DIAN-16H. Pkt. 25c

A very pink hybrid of this species.

—deltoides. DIAN-77. Pkt. 50c

(Maiden Pink). Small rosy purple flowers; dwarf turf habit, and fine for edging or the rock garden, HP, 6 inches.

—deltoides, Brilliant. DIAN-26. Pkt. 25c

(Maiden Pinks). A brilliant rich rose-pink variety, HP. Pretty, fragrant.

—erecta. DIAN-27. Pkt. 20c

Crimson flowers on short erect spikes.

—fragrans. DIAN-78. Pkt. 30c

A favorite white single Pink, powerfully fragrant, HP, 1 ft.

—jacquimontii. DIAN-95. Pkt. 40c

—Knappi. DIAN-42. Pkt. 20c

Pure lemon yellow, an unique color in Dianthus and a real addition to the flower garden; grow it with Jasione perennis for a delightful blue and yellow effect, 18-in. tall.

—latifolius atrococcineus. DIAN-43. Pkt. 15c

(Everblooming Sweet William). Double flowers of deepest glowing crimson, erect, long in bloom, 1-ft.

—lieboschitzianus. DIAN-93. Pkt. 25c

—monspessulanus. DIAN-45. Pkt. 25c

Large fragrant flowers with deeply fringed petals, varied colors with many nice shades of pinks. Showy rock garden, border or bedding plants, 1-ft.

—neglectus. DIAN-48. Pkt. 50c

(Glacier Pink). Small odorless red-purple flowers, the toothed petals tawny underneath.

—nigricans. DIAN-69. Pkt. 30c

Foliage and stems dark purple, flowers dark red, HB, 1½ ft.

—nobilis. DIAN-68. Pkt. 20c

—pyridicola. DIAN-94. Pkt. 35c

—subcaulis. DIAN-90. Pkt. 30c

An attractive rock garden species with pretty pink flowers, HP, 9 inches.

—Sundermann. DIAN-81. Pkt. 50c

A Macedonian species with large white flowers, rare, HP, 6 inches.

—Species Mixed. DIAN-83. Pkt. 35c

An English grown mixture of Dianthus species suitable for rock gardens, old walls, pavements, etc., HP, 1 ft.

SWEET WILLIAM Dianthus barbatus.

While these are biennials they are best grown as hardy annuals, especially in the N. All are about 1½-ft. tall, excellent in beds and for cutting; they flower in June when cut flowers in the garden are scarce.

—Single Annual Mixed. DIAN-66. Pkt. 20c

An annual flowering strain of Sweet William, which if planted early will bloom profusely.

—auriculaeiflorus. DIAN-70. Pkt. 25c

Auricle-eyed Sweet William. The old fashioned type, grown in England, HB, 1½ ft.

—Harlequin. DIAN-6. Pkt. 10c

Has white, rose and red shades of color on one head.

—Newport Pink. DIAN-9. Pkt. 10c

Beautiful single salmon-rose.

—Pink Beauty. DIAN-72. Pkt. 25c

A charming strain in many shades of salmon-pink, HB, 1½ ft.

—Purple Beauty. DIAN-10. Pkt. 10c

Bright deep purple single flowers.

—Scarlet Beauty. DIAN-11. Pkt. 10c

—Single Dark Crimson. DIAN-4. Pkt. 10c

—Single Holborn Beauty. DIAN-29. Pkt. 10c

Very large eyed on pretty single flowers in mixed colors.

—Single Auricle-Eyed Mixed. DIAN-5. Pkt. 10c

—Mixed Single Sweet William. DIAN-66. Pkt. 10c; oz. \$1.25

—Single Dwarf Alpine Mixed. DIAN-14X. Pkt. 20c

This dwarf, compact form of single Sweet William is ideal for rock gardens and low edgings; the clusters of many colored bright flowers are set snugly over the tip of the 6-in. tall plants during late spring and early summer; sow seed in July or Aug. for the next year's bloom. Altho a hardy biennial it is usually more satisfactory to make sowings annually; in favorable locations, plants often live over 2-3 years.

—Double, Mixed. DIAN-15X. Pkt. 10c;

Double, dwarf, compact.

—Mixed Sweet William. DIAN-73. Pkt. 25c

This is a T&M English grown strain of the very best single flowered varieties, HB, 1½ ft.

CARNATIONS—

DIANTHUS caryophyllus.

Some of the types are also called Clove Pinks. They are especially noted for their fragrance, the whites being the most pronounced and the reds the least. The greenhouse carnation belongs under this heading as well as many hardy sorts as listed below. As a general rule seed should be started indoors for early plants or up until Aug. for outdoor plants for the next year flowering. Space a foot apart and the larger the flower, the more necessary it is to supply supports.

—Heinemann's Double Flowered. DIAN-91. Pkt. 30c

This is a special new strain of the famous Heinemann Carnation, in a choice blend of colors. Extra good.

—Enfand de Nice, Mixed. DIAN-17. Pkt. 25c

This is the result of a cross between Chabaud's Giant and Perpetual; the plants are robust, upright habit, with long strong stalks bearing 2½-3-in. flowers, a magnificent strain coming 75% true from seed and 90% double.

—Giant Perpetual. DIAN-18. Pkt. 25c

The largest flowered clove-scented strain for garden use; similar in habit, for form, percentage and earliness to the Chabaud Giant Improved. Under cold frame forcing it will produce excellent commercial cut flowers.

—Teicher's Biennials. DIAN-20. Pkt. 50c

A large, long stemmed, hardy perennial Carnation of highest merit, 2-ft.

—Chabaud Giants. DIAN-21. Pkt. 35c

(D. marquerite). Everblooming Carnations. The giant everblooming carnations are as easily grown as the D. Marquerite, flowering about 6 months from time of sowing, they have the added advantage, tho, of being truly everblooming, producing without interruption during the whole summer, large and fine, very double flowers. A fine type of Carnation, 16-20-in. tall, of good habit; strong, stiff stems, colors coming true from seed and up to 95% very double flowers. Excellent for growing in pots, for beds and for cut flowers. Sow in Jan.-Feb. flowering from Jan. till winter sets in.

—Chaubaud Giant Mixed. DIAN-21T. Pkt. 35c

An extra fine English grown strain of Giant Carnations, excellent for cut flowers or garden decoration, flowering in 6 months after sowing seed, HP, 1½ ft.

—Perpetual Flowering. DIAN-75. Pkt. 90c

An especially fine T&M strain of double flowered Carnations, grown for us in England, mixed varieties, HP, 2 ft.

—Crimson Bedder. DIAN-76. Pkt. 75c

A hybrid pink of great beauty, bright crimson, single flowers, HP, 2 ft.

—English Giants. DIAN-67. Pkt. 50c

A fine strain of large flowered hardy Carnations in mixed colors, HP, 1½ ft.

—Giant Double Marquerite. DIAN-22. Pkt. 25c

Mixed colors, plants bloom within 6 months from seed planting, HP, 18-inches.

—Grenadin, Mixed. DIAN-28. Pkt. 25c

Splendid mixture of these 18-22-in. plants, HP.

—Grenadin, Giant Malmesbury. DIAN-23. Pkt. 35c

Largest sized flowers, fragrant and one of the most satisfactory garden types.

—Grenadin, Tausendschon. DIAN-19. Pkt. 50c

A new variety, color varying from delicate rose to salmon rose, its flowers are faultless, double and regular shape, excellent cut flowers, HP, 18-22-in.

—Mauser. DIAN-24. Pkt. 50c

A new Swiss race, 95% double flowers, with a rich color blend, exceptionally good.

—Early Dwarf Vienna. DIAN-25. Pkt. 35c

Extra choice strain of double flowered bright colors and free blooming; especially good for bedding as well as cutting; while biennial, treat as an annual, starting seeds early indoors, 15-in. tall.

—heddensis, Westwood Beauty. DIAN-30. Pkt. 15c

An entirely new tetraploid variety combining the large open flowers of D. heddwigi with the rugged growth and long stem habit of D. chinensis. Well formed 2-in. flowers in large numbers, stems 16-in. suitable for cutting and more tolerant of extreme temperatures than either of its parents. Color variable in red, shades of crimson and scarlet, single, lacinated, 1-ft., Hardy Annual.

—Schonheit. DIAN-31. Pkt. 20c

A pretty new Swiss variety just received. HA.

—Finest Mixed. DIAN-32. Pkt. 15c;

½ oz. 70c

HEDDEWIGII:

Dianthus chinensis, Indian or China Pink. Introduced in 1713 and comes in various forms, double, single and lacinated and all large flowers, the best strains are of Japanese origin. Sow seeds after first of year for early flowering out of doors from April to June for late summer and autumn flowering. They are also fine in pots carried over in cold frame and flowering from May on in 6 inch pots. All are hardy annuals and about 9 inches tall.

—heddwigi, Fireball. DIAN-33. Pkt. 15c

(Japanese Pinks). Double deep scarlet. Hardy annuals.

—lacinated Mixed. DIAN-34. Pkt. 10c

—Double Mixed. DIAN-35. Pkt. 10c

—nobilis. DIAN-36. Pkt. 15c

(Royal Pink). Flowers very large, 3-4-in., frilled and fringed in most charming colors. HA.

—splendens. DIAN-37. Pkt. 15c

A new Swiss variety, dark red with white eye.

—Double, Mixed. DIAN-38. Pkt. 15c

—Single, Mixed. DIAN-39. Pkt. 15c

—Crimson Belle. DIAN-86. Pkt. 25c

Flowers deep crimson, very showy variety.

—Fireball. DIAN-87. Pkt. 25c

A fine double variety with rich glowing scarlet flowers.

—Lucifer. DIAN-88. Pkt. 25c

Lacinated variety with deep glowing crimson flowers.

—splendens. DIAN-89. Pkt. 25c

Large single flowers, lacinated, brilliant crimson, neat compact habit.

—Mixed. DIAN-39T. Pkt. 30c

An English grown strain of single dwarf Japanese varieties, HA, 9 inches.

## HYBRID PINKS:

Listed here are those Dianthus that are hybrids of different species and not correctly listed under any species.

—Delight. DIAN-79. Pkt. 70c

Fine novelty in various shades and colors, continuous flowering, HP, 9 inches.

—Hybrids, Highland Strain. DIAN-40. Pkt. 25c

Beautiful strain of large flowered hardy Pinks, vivid colorings rich in varied shades and combinations of pink and rose; wide assortment of beautiful forms, selfs and zoned flowers with pink and rose tones dominating.

—Loveliness. DIAN-80. Pkt. 70c

Deeply lacinated mauve flowers, sweetly perfumed, HP, 1 ft.

—Sweet Wivelsfield. DIAN-41. Pkt. 15c

A distinct race of Pinks with large flowers in shades of pink, rose, crimson, scarlet, and others with edges and centers of contrasting colors, blooming several weeks during summer; excellent for borders, rockery, edgings or cutting, 1-ft.

—flora pleno. DIAN-82. Pkt. 50c

Double form of Sweet Wivelsfield, HP, 1½ ft.

—Marguerite Carnation, Saier Blend. DIAN-44. Pkt. 25c

This is the most generally satisfactory garden variety, as it is early flowering and blooms more profusely under more different conditions. The flowers are long stemmed, double, very fragrant and in wide variety of colors; in all areas except where the winters are very severe, the plants will live over 3 or 4 years. If seed is started early first flowers can be had by July and till frost.

DIANTHUS PLUMARIUS.

(Grass or Clove Pinks). Hardy perennials, the foliage grassy-like in strong clumps, thin wiry stems, very free flowering, fragrant. Easily grown from seed, preferring well drained soil and a sunny position; excellent for edging paths. Blooms early June to mid-summer and if faded flowers are removed the blooming period will be lengthened.

—Perpetual Dwarf Harlequin. DIAN-47. Pkt. 10c

White, rose and red flowers on same flower head.

—Double Rose. DIAN-49. Pkt. 15c

—Ipswich Crimson Double. DIAN-82. Pkt. 50c

A very deep crimson and a double type, HP, 1 ft.

—Dwl Double Mixed. DIAN-92. Pkt. 15c

—Ipswich Pink. DIAN-83. Pkt. 50c

A really good rosy pink double variety, HP, 9 inches.

—Ipswich White. DIAN-81. Pkt. 50c

Double ivory-white, non-bursting flowers, HP, 9 inches.

—Mrs. Sinkins. DIAN-84. Pkt. 60c

Large pure white double clove scented flowers, HP, 1 ft.

—Rose of May. DIAN-85. Pkt. 60c

A very pretty variety with large double rose flowers, HP, 6 inches.

—Scotch, Mixed. DIAN-50. Pkt. 25c

—Mayflower. DIAN-51. Pkt. 25c

Early double in lovely color range.

—semperflorus. DIAN-52. Pkt. 20c

(Everblooming Pinks). Single, semi-double and double flowers in fine colors, 18-in.

—cyclops. DIAN-53. Pkt. 15c

Fine single Pink, rosy-crimson with dark zone, 1-ft.

—Scoticus, Mixed. DIAN-54. Pkt. 20c

(Special Florist Strain). Self colors of various tints of pink, rose, salmon, and white and the same colors in combination with bright crimson zone. Blooms 1½-2-in. across, free flowering. This is the best of the D. plumarius. Stems 12-15-in.

—Double, Mixed. DIAN-55. Pkt. 20c



**DRYMOCALLIS (dri-mo-CAL-lis)**

Western plants very close to *Potentilla* and looking exactly like them except to the botanist. They have deeply gashed leaves and sprays of yellow or white strawberry-like blossoms. They are interesting plants for the rock or wild garden but not showy enough for the herbaceous border; easily grown from early planted seeds.

—*glutinosa*. DRYM-1. Pkt. 25c  
One of the taller species for the back of the rock garden or for a sunny spot in the wild garden; flowers yellow, about 3/4 inch across in broad branching sprays; leaves are quite attractive, HP, 2 ft.

**DYCKEA**

—*sulphurea*. DYCK-1. Pkt. 25c

**ECHEVERIA (ek-e-VEE-ri-ah)**

Succulent having leaves in rosettes and small flowers usually in spikes. Grown indoors in pots and sometimes bedded out in summer. Require a light, sandy soil, excellent drainage. Handle like succulents.

—*giorgis*. ECHV-1. Pkt. 50c

**ECHINOPS (e-KY-nops)**

(Globe Thistle). Thistle-like perennial and biennials with flowers in round heads. They are very decorative in the border and easily grown from seed.

—*niveus*. ECHN-2. Pkt. 25c  
Large heads of white flowers and silvery foliage, HP, 5 ft.  
Free flowering annual, white flowers with blue zone, HHA, 9 inches.

—*ruthenicus*. ECHN-3. Pkt. 25c  
Similar to *E. ritro* but less robust, a very fine blue, HP, 5 ft.

—*ritro*. ECHN-1. Pkt. 15c  
Small globe thistle with finely cut, white downy leaves and steel blue flowers, blooming all summer, perennial, 2-ft.

**ECHIUM (EK-i-um)**

(Vipers Bugloss). Annual, biennial and perennial plants of Borage Family. Purple, rose or white flowers in coiled racemes or shown spikes. Thrive in poor soil in open sunny locations, producing only leaves if too rich. Some of the species are very popular in Cal.

—*vulgare*, Blue Bedder. ECHM-2. Pkt. 25c  
A new compact variety with deep bright blue flowers, HP, 1 ft.

**EMILIA (e-MIL-i-ah)**

(Tassel-flower, Floras Paintbrush). Annual and perennial plants of low, neat habit native of the tropics. The slender stems are tipped by small, rayless, many colored flower heads surrounded by soft, white bristles resembling tiny paint brushes. Grow in sunny places, July-frost. Treat as half hardy annuals. Formerly listed as *Cacalia*.

—*sagittata lutea*. EMIL-1. Pkt. 15c  
Popular annual garden species, to 1 1/2 ft. with yellow flowers in loose clusters.

—*coccinea*. EMIL-2. Pkt. 15c  
Same but with red flowers.

—*Mixed*. EMIL-3X. Pkt. 15c  
Exceedingly gay flowers that seem to have been dipped in paint of vivid red, yellow, others in golden orange with red dominant, 1 1/2 ft.

**ENKIANTHUS (en-ki-AN-thus)**

Hardy deciduous shrubs of the Heath Family, native of Asia. Attractive, upright growth with whorled branches; long slender clusters of nodding flowers in spring, showy and suggest the common name, Necklace-bush. Thrive in moist sandy loam with peat or leaf mold; easily grown from seed.

—*himalaiensis*. ENKI-1. Pkt. 25c

**EPILOBIUM (ep-i-LOH-bi-um)**

Willow-herb. Easily grown plants with willow-like leaves; they have white or yellow flowers and long fruit pods or capsules, HP.

—*rigidum*. EPIL-1. Pkt. 25c

**EREMURUS (er-e-MEU-rus)**

(Desert Candle, Foxtail-lily, Giant Asphodel). The hardiest of the tall desert members of the Lily Family. They are most spectacular. The flower stalk, in some species, rise as high as 8-ft. and clothed for half its length in close-set starchy blooms, lasting for several weeks. Becoming more popular both in border and as florist flower. A rich, fibrous, well drained soil with sand and a sunny location are essential. The seedlings develop slowly. For winter protection a covering of leaves with a water-tight box over them is ideal.

—*Finest Mixed*. EREM-1. Pkt. 20c

—*himalaiensis*. EREM-2. Pkt. 35c  
Very hardy pure white variety with very long spikes, HP, 5 ft.

—*hybridus*. EREM-3. Pkt. 60c  
Wallace's famous strain of English grown *Eremurus*, HP, 6 ft.

—*robustus*. EREM-4. Pkt. 50c  
A fine species with rose colored flowers, HP, 3 ft.

—*Elvesianus*. EREM-5. Pkt. 50c  
A splendid new form of *E. robustus*, larger in all parts, HP, 10 ft.

**ERIGERON (e-RIJ-er-on)**

Aster-like annuals and perennials known as Fleabane, flowers in heads with white rose or violet ray-flowers and yellow disc flowers. Plant in warm sandy soil in full sun. Fine for the border, some for the wild garden, and a few are grown in the rock garden. Easily grown from seed.

—*compositus*. ERIG-4. Pkt. 25c  
Has feathery gray foliage, pale lavender flowers, 2-in. tall.

—*concinus*. ERIG-3. Pkt. 20c  
Native of Mont. and Wyo., small blue, 8-12-in. tall, May-Aug. Easy to grow.

—*coulteri*. ERIG-2. Pkt. 20c  
Native of Mont., large white flowered species of the moist woods, 8-12-in. tall, July-Aug.

—*glabellus*. ERIG-5. Pkt. 25c  
Pale blue flowers and smooth foliage, one of the best of taller species and fine

—*mucronatus*. ERIG-6. Pkt. 25c  
(Syn. *Vittadenia triloba*). Flowers white changing to rosy pink, HP, 6 inches.

—*multiradiatus*. ERIG-8. Pkt. 40c  
Flowers deep violet-blue with dark bronzy black cone in center; 4" tall, found at 10,12,000 ft., fine for Rock Garden.

**ERINUS (e-RY-nus)**

Hardy European mountain perennial commonly grown in dry rock wall or crevices in the rock garden, blooming in April, flowers small red-purple and rising 3-4 inches above the matted foliage; excellent rock plant and for pots, HP, 6 inches.

—*alpinus*. ERIN-6. Pkt. 25c

**ERIOGONUM (er-i-o-GOH-num)**

Herbs and sub-herbs native of the western U.S. Require well drained peaty soil and sunny location; grown in the rock garden.

—*flavum, piperi*. EGON-5. Pkt. 25c  
Native of Mont. medium green leaves, with yellow flowers, 8-in. tall, April-May.

—*microthecum*. EGON-4. Pkt. 25c  
Good. Native of Mont., gray-white mounds supporting many white to rose flower heads, best in scree soil with best of drainage, 6-in. tall, April-May.

—*nudum*. EGON-6. Pkt. 35c  
Grows on hot dry rocks or poor gravelly soils; one of the easiest species, very handsome and showy, yellow heads on 12" stems, a good companion for Limniums (*Statice*), HP.

—*pyrolaeifolium*. EGON-2. Pkt. 25c  
Dwarf, heads of white to red flowers on short stems; dry sunny location in R.G., 4 in., HP.

—*ovalifolium*. EGON-3. Pkt. 25c  
A lovely R.G. species with silver leaves in a dense mound and almost stemless ball-shaped flower heads, white turning to pink and rarely rich red; sun, dry soil, 3-6 in., HP.

—*subalpinum*. EGON-1. Pkt. 25c  
Native of Mont., large yellowish white flowers turning rose with age, 1-ft. tall, May-June.

**ERIOPHYLLUM (er-i-oh-FIL-um)**

Annual and perennial herbs and sub-herbs native to Western N. Am., of Daisy Family. Widely grown in dry places.

—*intergrifolium*. ERIO-2. Pkt. 25c  
Small Oregon Sunshine. Worth its weight in gold when happy golden flowers, 6-12-in. tall, May-Aug.

—*lanatum*. ERIO-1. Pkt. 25c  
Oregon Sunshine. Native of Mont. and very good, gray-white foliage an like the gravelly soil of a rock slide or road band. Short lived but reseeds itself. Golden flowers, 12-18-in. tall, May-Aug.

—*lanceolatum*. ERIO-7. Pkt. 50c  
Alpine Oregon Sunshine. Grows on hot rocks in crevices; dense wooly foliage, profuse blooms of yellow flowers; a real gem for the rock garden, 2-4" high, HP.

—*Mixed*. ERIO-6X. Pkt. 15c

**ERODIUM (e-ROH-di-um)**

A genus of the Geranium Family of annual and perennial species; they require a gritty loam soil with lime in it and a sunny position in the border or rock garden. They have a long blooming season.

—*amanum*. EROD-1. Pkt. 25c  
White flowers, gray foliage; a distinct and beautiful species, HP, 6 inches.

—*olympicum*. EROD-2. Pkt. 40c  
White flowers, with dark blotch at base of the petals, HP, 6 inches.

—*pelargoniflorum*. EROD-3. Pkt. 25c  
Flowers spotted; leaves large and rounded, HP, 6 inches.

**ERYNGIUM (e-RIN-ji-um)**

(Sea-holly, Eryngo). The steel blue or gray foliage of the larger species is most attractive in the border and the smaller kinds are very suited for the rock garden; the taller types furnish excellent cut flowers which can be dried for winter bouquets; plant in a light rich soil in an open sunny location. Mostly perennials.

—*alpinum superbum*. ERYN-2. Pkt. 20c  
Light blue, June-July, germinate cool, in light.

—*giganteum*. ERYN-1. Pkt. 25c  
A robust border species, involucrum ivory-white, HP, 3 ft.

—*giganteum*. ERYN-1. Pkt. 20c  
(Silver-thistle). HP, 3-ft. tall.

—*oliverianum*. ERYN-3. Pkt. 25c  
Spiny foliage; flowers, bracts and stems blue, the flowers 1 1/2 inches long, surrounded by the very narrow stiff bracts, HP, 2 1/2 ft.

**ERYSIMUM (e-RIS-i-um)**

Closely resembling Wallflower, commonly known as Blister-cress, having white, yellow or lilac flowers, the smaller species being excellent rock garden and edging subjects for sunny positions, sow the annuals where they are to remain. Easily cultivated.

—*allioni*. ERY-1. Pkt. 20c  
(Siberian Wallflower). Sometimes listed under *Cheiranthus*. Dwarf compact deep orange reselected. HA, 1-ft.

—*nana compacta*. ERY-5. Pkt. 20c  
Saffron-yellow colored flowers on compact dwarf plants making them a very desirable dwarf variety.

—*Golden Bedder*. ERY-3. Pkt. 15c  
A new, very desirable variety, HA, 1-ft. tall.

—*perofskianum*. ERY-2. Pkt. 15c  
(Blister Cress). Hardy annual, orange yellow flowers.

—*Elatum*. ERY-4. Pkt. 25c  
Western Wallflower. Biennial, native of Mont., orange-yellow flowers, 12-18-in. tall, April-June.

**ERYTHRINA (er-i-THRY-nah)**

Coral Tree. Thorny trees of the Pear Family, grown in the open in the South, they are easily grown from seed. They have attractive flowers.

—*arbores*. ERT-1. Pkt. 25c

—*Indica*. ERT-2. Pkt. 25c

**ERYTHRONIUM****(er-i-THROH-ni-um)**

Dog's Tooth Violet, Trout Lily, Adder's tongue. A genus of early spring-blooming bulbous plants of the Lily Family, with graceful nodding flowers and often richly mottled leaves. They are especially attractive in the rock garden or naturalized in masses in light soil, partly shaded such as would be found at edges of woods. Give much of leaves in winter.

—*citrinum*. ERYT-3. Pkt. 25c

—*grandiflorum*. ERYT-1. Pkt. 25c  
(Glacier Lily). Green leaves, bright but-tercup-yellow flowers, 2-ft. HP.

—*hendersoni*. ERYT-2. Pkt. 50c  
One of the easiest species, especially in the East; large lavender and purple flowers, 1-8 to the stem, full sun or part shade, will stand heavy clay woodland soils; fine for naturalizing where it self sows, also for rock garden.

—*religiosa*. FIG-3. Pkt. 35c  
The Peepul Tree of India. Its rounded leaves, with long tail-like appendages, rustle in the slightest breeze; hardy in southern Calif., elsewhere a greenhouse plant.

—*ramosa*. FRAN-1. Pkt. 25c  
(Bridal Wreath). Pure white flowers and a very neat species, HHP, 2 1/2 ft.

—*texensis*. FRAX-1. Pkt. 35c  
Native of Texas, street tree.

—*berlandierian*. FRAX-2. Pkt. 35c  
Small ornamental street tree of quick growth, native of Texas.

—*hybrida tubergenii*, Choice Mixed. FREE-1. Pkt. 75c  
Large flowered, displaying a beautiful range of bright colors. Saved from the finest collection in existence, European grown.

—*Luzi*. FREE-2. Pkt. \$1.00  
A new type that excels the many older and newer kinds that are on the market. The flowers are very large, as much as 1 1/2 inches or more (7 cm); are larger than any other type. Flowers are especially well formed and wide open. The colors are very rich and from pure white and cream to clear yellow and into dark yellow, orange to dark orange, all shades of blue and violet, pinks and reds, with some new shades of red. These colors are extremely bright, growth strong, flowers attaining a height of 80 cm or 30 inches with 3-4 long shoots per sprout, each sprout having as many as 10 flowers.

—*acropetalata*. FRIT-11. Pkt. 50c  
This species bears one or two quite large flowers of olive-green and purple, above short basal leaves; rare and handsome, 1 1/2 ft., HP.

—*circrhosa*. FRIT-2. Pkt. 25c  
Flowers 1-2-in., greenish, drooping bell-shaped flowers.

—*imperialis rubra*. FRIT-10. Pkt. 50c  
A handsome red variety of the Crown Imperial, having become quite rare and expensive since the war; plant in border where it is sheltered from strong winds, 3 ft., HP. This is an extra large red form.

—*melucgria alba major*. FRIT-13. Pkt. 50c  
A large white-flowered form, lovely in masses, very easy and hardy, for shady place, 2 ft., HP.

—*Mixed Colors*. FRIT-7. Pkt. 25c

—*pallidiflora*. FRIT-8. Pkt. 25c  
Pale yellow flowers spotted inside, glaucous foliage, HBB, 9 inches.

—*pudica*. FRIT-1. Pkt. 20c  
Yellow Bell. Earliest spring flowers, yellow 6-8-in. tall, April.

—*pyrenaica*. FRIT-9. Pkt. 25c  
Flowers plum-olive color, beautifully reticulated brown, HBB, 1 1/2 ft.

—*roylei*. FRIT-4. Pkt. 25c  
Yellowish green, streaked with purple.

—*tuntasia*. FRIT-12. Pkt. 75c  
A very rare species, long lost to cultivation, a tall species from the Cyclades, with lovely metallic black flowers borne on ft. high stems, and coming from stony hillsides. Probably will be fine in the rock garden, HP.

—*Mixed*. FRIT-6X. Pkt. 20c  
NOTE: We should be able to add to the above list some 10 more species of which we are not sure of delivery as this is written.

—*species*. GAGE-1. Pkt. 40c

—*paradoxa*. FAIL-1. Pkt. 25c  
Only species of this genus, belonging to Rose Family. Low spreading deciduous shrub with white flowers, later attractive heads of feathery-tailed fruits; hardy to Mass., requires a well drained limestone soil, warm position, easily grown from seed.

—*clypeata*. FARS-1. Pkt. 25c  
Yellow flowers and small honesty-like seed pods, HP, 1 1/2 ft.

—*bergeriana*. FELC-1. Pkt. 75c  
(Kingfisher Daisy). Low spreading annual with bright blue star-shaped flowers, a gem for the rock garden, HA, 2-inches.

—*elastica*. FIG-2. Pkt. 35c  
The popular "Rubber Plant," with naked stems dotted with long shining leathery leaves; will stand much abuse as a house plant, requiring little light,

—*bengalensis*. FIG-1. Pkt. 30c

—*religiosa*. FIG-3. Pkt. 35c  
The Peepul Tree of India. Its rounded leaves, with long tail-like appendages, rustle in the slightest breeze; hardy in southern Calif., elsewhere a greenhouse plant.

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—*pallidiflora*. FRIT-8. Pkt. 25c  
Pale yellow flowers spotted inside, glaucous foliage, HBB, 9 inches.

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Yellow Bell. Earliest spring flowers, yellow 6-8-in. tall, April.

—*pyrenaica*. FRIT-9. Pkt. 25c  
Flowers plum-olive color, beautifully reticulated brown, HBB, 1 1/2 ft.

—*roylei*. FRIT-4. Pkt. 25c  
Yellowish green, streaked with purple.

—*tuntasia*. FRIT-12. Pkt. 75c  
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A very rare species, long lost to cultivation, a tall species from the Cyclades, with lovely metallic black flowers borne on ft. high stems, and coming from stony hillsides. Probably will be fine in the rock garden, HP.



**GERANIUM (jee-RAY-ni-um)**

The Geranium of the florist and the common house plants are listed under Pelargonium; here under this list are the true Geraniums, mostly hardy plants. They have mostly lobed or divided leaves and showy flowers of many colors, usually under 1 1/2-inch but sometimes as large as 1 1/2-inches. They are excellent for the border and the rockery and do well in any good soil; some are well adapted for naturalizing.

—**anemonae-folium.** GERN-6. Pkt. 50c  
Very handsome foliage, tall, rose-pink flowers for mild climates; 2 ft., HP.

—**armenum.** GERN-5. Pkt. 25c  
A fine border plant, robust grower with dark red flowers, 1 1/2 ft., HP.

—**collinum.** GERN-4. Pkt. 50c  
A very variable species that in its best forms is almost equal to the incomparable *G. farreri*. Leaves are small, deeply cut, and borne singly on stalks 3-4 in. long; flowers should be about 1 inch across and may be purple or even crimson; easy in the sunny rock garden and well worth trying.

—**grevilleanum.** GERN-1. Pkt. 25c  
A creeping plant with kidney-shaped leaves, hairy and deeply cut, flowers as much as 2 inches across, pale rose, sometimes with large purple spots.

—**napaleense.** GERN-2. Pkt. 25c  
A straggling plant found on banks and bearing small pink flowers.

—**pratense.** GERN-7. Pkt. 15c

—**album.** GERN-5. Pkt. 50c  
A very hardy form of the wild English Cranesbill, large pure white flowers and a good border plant, 2 ft., HP.

—**sanguineum.** GERN-3. Pkt. 15c  
Rounded plant 8 inches tall, 5-7 lobed leaves and reddish purple flowers.

**GERARDIA**

—**virginica.** GERA-1. Pkt. 25c  
The anthers are very interesting and typical of the genus for automatically dumping the pollen onto the back of the bee. Desirable for cut flowers and garden, flowers 2" across, nice yellow, in rich soil will reach 6 ft.

**GERBERA (GER-be-ra)**

Tender perennial needing winter protection; the flowers are very popular for cutting and are extensively grown by florists. Start seeds in a warm place such as a sunny window, sowing seeds singly with points up just above the soil; in setting plants out keep crown just above the surface of the soil. Sunny location, well drained soil best; also makes fine pot plants for winter; 1 1/2 ft.

—**Double.** GERB-3. Pkt. \$1.00  
These should be ordered early, delivery between Feb.-May; seeds from the best double Gerbera collection in the world, 70% coming double. Pkt. contains 20 seeds.

—**jamesoni Hybrids.** GERB-1. Pkt. 25c  
About 25 seeds in packet.

—**Giant Hybrids, S. gle.** GERB-2. Pkt. 35c  
Hybrids from India. Should be planted immediately.

**GEUM (GEE-um)**

Easy to grow perennials, erect and generally dwarf, excellent for cutting and adapted for rock gardens, borders or beds. Bloom freely from May to Oct. Plants thrive best in light rich well drained soil in open sunny locations. Sow seeds in the open ground early in spring, 18-in. tall.

—**chiloense, Fire Ball.** GEUM-1. Pkt. 15c

—**Gold Ball.** GEUM-2. Pkt. 15c

—**Mrs. Bradshaw.** GEUM-3. Pkt. 15c  
Large, rich double scarlet flowers, pretty.

—**Lady Stratheden.** GEUM-4. Pkt. 15c  
Double golden yellow flowers, New.

—**coccineum.** GEUM-5. Pkt. 15c  
Similar foliage, flowers bright red, 1-in. across.

—**Lady Stratheden.** GEUM-4T. Pkt. 25c  
Rich golden yellow flowers, double, HP, 2 ft.

—**elatum.** GEUM-8. Pkt. 40c  
A rock garden or border species from the Himalayas with enormous golden, or rarely white, flowers on stems of 6 inches to 2 ft. A woodland plant and best in light shade, HP.

—**montanum.** GEUM-6. Pkt. 15c  
Golden yellow flowers, 1 1/2-in. across, plants 1-ft. tall.

—**urbanum.** GEUM-9. Pkt. 75c  
A rare species from India.

—**Wright's Brilliant.** GEUM-10. Pkt. 25c

—**Mixed.** GEUM-7X. Pkt. 15c; 2 for 25c

**GILIA (JIL-i-ah)**

Annual, biennial and perennial plants mostly from W. No. Amer. of Polemoniaceae Family. Easily grown in ordinary garden soil, sowing seed where they are to grow.

—**achilleae-folia.** GIL-2. Pkt. 10c  
Bushy hardy annual to 2-ft., finely divided leaves and dense clusters of blue or purple flowers.

—**aggregata.** GIL-7. Pkt. 50c  
For rock garden and border, bright orange, scarlet or red flowers, sun, best in light gritty poor soils, 8-15", HP.

—**capitata.** GIL-3. Pkt. 10c  
(Queen Ann's Thimble). Summer blooming, hardy annual to 2-ft. with dense roundish heads of light blue flowers, blooms continuously.

—**micrantha.** GIL-5. Pkt. 15c; 1/4 oz. 35c  
(Fairy Stars). Pastel shades of tiny single star-like flowers or neat 6-in. plants, hardy annual, excellent for rock gardens, ground covering or cutting for miniature bouquets. Salmon, pink, copper, yellow and cream. Star-like flowers on neat 6 inch plants, hardy perennial.

—**rubra.** GIL-4. Pkt. 15c  
This is sometimes listed as *G. coronopifolia*.

(Tree or Standing Cypress—*Ipomopsis Elegans*). Finely dissected leaves and a narrow panicle of scarlet flowers with orange or yellow markings, half hardy biennial best grown as annual, 6-ft.

—**tricolor.** GIL-6. Pkt. 25c  
White and violet flowers with yellow throat; a neat annual, HA, 9 inches.

—**tricolor, Choice Mixed.** GIL-6. Pkt. 10c; 1/4 oz. 25c  
Hardy annual with lilac flowers spotted yellow and purple in center; fine bloomer, 1-ft.

**GLADIOLUS (glad-i-OH-lus)**

A genus of tender cormous plants native of So. Africa and too common in the U.S. for an extended description. Growing

them from seed is of special interest and much pleasure as well. The seed should be sown in rows in flats and placed in a cold frame until they have germinated and made some root growth; or better still, sow the seed in rows in a protected bed, where they can grow till fall, undisturbed. The corms must be dug before freezing weather and stored indoors over the winter.

—**Unnamed Species.** GLAD-3. Pkt. \$1.00  
An unnamed species from South Rhodesia, palish yellow in color; the Royal Botanic Garden at Kew is growing this from seed with a view of naming it. It is recommended as distinctly worth growing. Only small amount of seed available.

—**blandus.** GLAD-5. Pkt. 25c

—**psittacus.** GLAD-4. Pkt. 50c  
A wild species from South Rhodesia and collected from the brightest red flowers. This should be of special interest.

—**Wonder Hybrids.** GLAD-1. Pkt. 50c  
This is an English grown strain, which will produce flowers the first season from seed.

—**tristis.** GLAD-2. Pkt. 50c  
Large very sweetly scented flowers of yellowish white, with a tinge of purple at center; fairly hardy but in the North should be grown as a pot plant; valuable, possible, for breeding fragrance into Glads, 2 ft.

**GLAUCIUM (GLAU-si-um)**

Members of the Poppy Family usually grown as annuals altho they are biennial and perennials; sunny situations where their large yellow, orange or red flowers with their bluish dissected leaves give a brilliant effect in the garden throughout the season.

—**Mixed.** GLAU-1. Pkt. 10c  
(Horned Poppy). Hardy perennial, flowers scarlet and yellow, makes fine showing in the border, 2-ft.

**GLEDITSIA (gle-DIT-si-ah)**

Honey Locust. Shade and lawn trees. Soak seeds in hot water before planting.

—**tricanthos.** GLED-1. Pkt. 35c  
Honey or Sweet Locust. This species is also used as stock for grafting choice specimens on.

**GLOBULARIA****(glob-eu-LAY-ri-ah)**

Little shrubby plants from the mountains of S. Europe and Asia, having blue and white flowers in rounded heads and grown in the rock garden; give a well drained soil in a moist and partly shaded location. Easily grown from seed.

—**tricosantha.** GLOB-1. Pkt. 25c  
Globe Daisy. A neat little plant with small toothed leaves and small heads of pale blue fluffy flowers on leafy stems, HP, 8 inches.

**GLORIOSA (gloh-ri-OH-sah)**

Glory-lily. Climbing herbaceous plants native to tropical Africa and Asia, belonging to Lily Family. They grow long tubers and make attractive summer flowering climbers under glass, and growing in the South outdoors and in the North can be set outdoors. Tubers are started indoors in pots doing best in a rough turfy loam with leaf mold, with liberal feeding when growth is under way. Easily grown from seeds sown when fresh and available throughout the year.

—**superba.** GLOR-1. Pkt. 50c  
Spider-lily. Fresh seed available about first of Feb., March and June. Orange and red flowers.

—**rothschildiana.** GLOR-2. Pkt. 50c  
A rather rare variety with crimson flowers with oblong strongly reflexed segments margined yellow and brooding to a yellow base. Fresh seed available as in Glor-1.

**GODETIA (goh-DEE-shi-ah)**

Attractive hardy annuals, bushy plants with masses of large pink, red and white showy flowers, for beds in sun or semi-shade, bouquets (all buds open in water). Thrive best in cool moist half shady situations, sow seeds broadcast late in the fall and allow to remain undisturbed when they will germinate quickly in the spring as the soil warms and then bloom profusely in late spring; they do not tolerate very hot sun.

GRANDIFLORA: 1-ft. known in many forms and very popular.

—**Cherry Red.** GODT-10. Pkt. 25c  
A tall double variety, HA, 2ft.

—**Dwarf Single, Sybil Sherwood.** GODT-1. Pkt. 15c  
1-ft., pretty salmon pink.

—**Dwarf Single Mixed.** GODT-2. Pkt. 10c; 1/2 oz. 50c

—**Dwarf Double, Sybil Sherwood.** GODT-3. Pkt. 15c  
Salmon pink, lighter shaded edges, 15-in. tall.

—**Rich Pink.** GODT-8. Pkt. 25c  
Double and an excellent cutting variety, 2 ft.

—**Tall Double, Mixed.** GODT-4. Pkt. 10c

—**Schamini, fl. pl.** GODT-9. Pkt. 25c  
A charming double variety with large bright salmon-rose flowers, HA, 2 ft.

**WHITNEY:**

—**azaleenschau.** GODT-7. Pkt. 20c  
A beautiful new variety from Germany and most highly recommended, 2 ft.

—**grandiflora Mixed.** GODT-4T. Pkt. 25c  
Tall double varieties in best mixture, English grown, HA, 2 ft.

—**Whitey, Maidens Blush.** GODT-5. Pkt. 15c  
Annual, azalea-like flowers in pink suffused with salmon.

—**Orange Glory.** GODT-12. Pkt. 25c  
A fiery orange-cerise color, HA, 1 ft.

—**Rosemund.** GODT-13. Pkt. 25c  
Dwarf compact variety with large glossy bright pink flowers, HA, 1 ft.

—**White Swan.** GODT-14. Pkt. 25c  
Masses of very large pure white flowers, HA, 1 ft.

—**Dwarf Varieties Mixed.** GODT-11. Pkt. 25c  
Including the best named varieties.

—**Prize Mixture.** GODT-6. Pkt. 15c; 1/4 oz. 80c  
An extra special mixture.

**GOMPHRENA (gom-FREE-nah)**

Useful for bedding and cut flowers as well as for "everlastings". Start seed indoors as it does not germinate well in the open ground, remove the cottony coating before planting. Annual, clover-like blossoms; for drying, do not pick the flowers

until well matured, protect from rats as they like the seeds.

—**rubra.** GOMP-1. Pkt. 10c; 1/2 oz. 35c  
Purple flowers.

—**Piccolo.** GOMP-2. Pkt. 15c  
A dwarf form with wine-red flowers.

—**Mixed.** GOMP-3X. Pkt. 10c; oz. 70c  
June-Aug., 2-ft., white, purple, wine-red, orange and pink.

**GOURDS**

Should be planted where they are to remain and not until the soil is thoroughly warm both night and day; the best location is a warm sandy soil somewhat on the dry side. Do not water much after the flowers appear, if watered too much blossoms and buds will drop. For perfect specimens the vines should be trained on a fence. Fruits must be well ripened, when stem becomes brown and hard and finger-nail cannot dent the shell; after picking, hang up in a dry airy place to thoroughly cure. The large shelled sorts are then washed and scrubbed before decorating and the small shelled sort just wiped clean of dust and given a light coating of shellac or varnish. There are so many different ways to use these ornamental fruits and they are so decorative during the winter that every garden should grow some. We have made up several blends to meet different demands, select the one meeting yours.

**SMALL FRUITED VARIETIES.**

(Cucurbita pepo).

—**Egg, White.** GORD-2. Pkt. 10c

—**Flat, Striped.** GORD-3. Pkt. 10c  
Dark green, yellow striped.

—**Miniature.** GORD-4. Pkt. 10c  
Fruits round, dark green and yellow striped.

—**Orange.** GORD-5. Pkt. 10c

—**Pear-shaped bicolor.** GORD-6. Pkt. 10c  
Green and yellow.

—**Pear-shaped, white.** GORD-8. Pkt. 10c

—**Pear-shaped, striped.** GORD-7. Pkt. 10c  
Dark green marked with longitudinal whitish bands.

—**Spoon.** GORD-9. Pkt. 10c

—**verrucosa, Warty.** GORD-10. Pkt. 15c  
Small green warty fruits.

—**Small Fruited Mixed.** GORD-11X. Pkt. 10c; oz. 25c; 4 oz. 90c

**LARGE FRUITED VARIETIES:**

(Cucurbita leucantha).

—**Bottle.** GORD-12. Pkt. 10c

—**Dipper.** GORD-13. Pkt. 10c

—**Hercules Club.** GORD-14. Pkt. 10c

—**Large-Fruited, Mixed.** GORD-15X. Pkt. 10c; oz. 25c; 4 oz. 90c

**GUNNERA (gun-NEE-ra)**

Herbaceous plants with leaves somewhat suggesting those of Rhubarb often enormous in size and highly ornamental. They like rich moist soil, sun, sheltered from high winds. Some species are fully hardy in the North but a heavy winter mulch of leaves is advisable; magnificent plants for subtropical effect.

—**species, Mixed.** GUNN-1. Pkt. 25c  
A tree which roots from the branches making in time a small grove. The red fruits, about the size of a small cherry, grows in pairs; grows vigorously in Fla. but a greenhouse plant in the N. Tree, to 100 ft.

**GYPHOPHILA**

(Baby's Breath). Both hardy annuals and perennials, their tiny flowers have an airy appearance; thriving in any soil and location, blooming in July to Aug. Sow seeds early in the open ground for the annual sorts, and for the perennials, plants can be started as late as Aug. so as to get size enough to winter over. They make excellent cut flowers and some make the best dried flowers.

ELEGANS: Annual type, dainty small bell-shaped flowers for mixing in bouquets; blooms within 6 weeks from sowing. Sow as soon as soil is read in spring, and for cutting, plant every 10 days or so.

—**Carmine.** GYP-1. Pkt. 10c; 1/2 oz. 40c

—**Crimson.** GYP-2. Pkt. 10c; 1/2 oz. 40c

—**Rosea.** GYP-3. Pkt. 10c; 1/2 oz. 40c

—**Mixed.** GYP-4X. Pkt. 10c; 1/2 oz. 40c

—**New York Market.** GYP-5. Pkt. 10c; oz. 35c; 4 oz. 95c

Pure white, largest flowered, with special emphasis placed on large and extra petaled flowers. Special strain for cut flower growers.

—**Covent Garden Market.** GYP-6. Pkt. 10c; oz. 35c; 4 oz. 95c

Greatly improved strain, unusually large flowers of fine substance. Excellent florist stock.

—**mangini.** GYP-7. Pkt. 10c  
(Mongolian Gypsophila). Hardy perennial, rosy white flowers, tall.

—**muralis.** GYP-8. Pkt. 10c  
Hardy annual, 1-ft. rose colored flowers, solitary and auxiliary, dwarf, good rock garden subject.

—**oldhamiana.** GYP-9. Pkt. 15c  
Bright flesh pink flowers, mid-summer till frost, 3-ft., perennial.

—**pacific, Pink.** GYP-10. Pkt. 20c  
Hardy perennial, good cutting and much branched plant of the *G. paniculata* type but later, more erect, clear rose pink, 3-ft.

—**paniculata, double, Snowflake.** GYP-11. Pkt. 20c; 1/4 oz. 60c

Hardy perennial with tiny round flowers covering the plant. July to frost; excellent for use in cut flowers and a very popular flower, 3-ft.

—**Snowstorm.** GYP-12. Pkt. 20c; 1/4 oz. 70c

Hardy perennial with flowers like tiny balls, covering the plant; flowers smaller than *G. elegans*, blooming all summer and fall and making the best of white cut flowers, making any bouquet much prettier with its misty effect; 3-ft.

—**Single White.** GYP-13. Pkt. 10c; oz. 60c

Hardy perennial with tiny mist-like white flowers in profusion, June-July; nothing better for mixing in bouquets for its misty effect; it is also an excellent everlasting, the whole plant can be hung up in an airy place and dried for winter use, 2 1/2 ft.

—**repens, Rose.** GYP-14. Pkt. 15c

An excellent perennial species, trailing dense carpet-like plant for rockeries, edging or border, rose color, June-July, HP, 6-in. tall.

—**White.** GYP-15. Pkt. 15c

Perennial, with white flowers otherwise same as above, HP, 6 inches.

**HABRANTHUS (ha-BRAN-thus)**

So. Am. bulbs closely related to *Amaryllis* and often classed as *Hippeastrum*. Have very showy trumpet-shaped flowers in red or yellow over strap-shaped basal leaves. Many species grow in very sandy soil and endure complete drought for months or even years. A few are a little hardy but all should receive *Amaryllis* culture.

—**brachyandrus.** HABR-1. Pkt. 25c  
Extremely beautiful *Amaryllid*, long tubular flowers in an unusual lavender-pink shading down to deep purple at base. Culture same as for *Zephyranthes*.

—**robustus.** HABR-1. Pkt. 25c  
Probably a variety of *H. eulicum* with broadly strap-shaped bright green leaves and a pair of large brilliant crimson flowers with red-purple blotch and green throat, 12-15".

—**robustus, Finest Mixed.** HABR-1. Pkt. 25c

**HAEMANTHUS (hee-MAN-thus)**

Blood Lily. African bulbous plants of *Amaryllis* Family with white or red lily-like flowers. Grown indoors in N. for spring and summer bloom.

—**coccinea.** HAEM-1. Seeds 10c each  
Unique and unusual, the flower scape is attractively mottled with purple and red and the flower is blood-red followed by green berries, turning red upon ripening. Soil should be rich loam with leaf mold.

—**punicus.** HAEM-2. Seeds 10c each  
A lovely subject for pot culture, the flowers are about 3" in diameter, salmon color and on 12" stems. Lasts several weeks and is of easy culture.

**HEDYCHIUM (hee-DIK-i-um)**

(Ginger Lily, Butterfly Lily, Garland Flower). Tropical plants of the *Ginger* Family mostly native of India. In frost-free regions they are favorites in the open garden but greenhouse plants in N. Robust growers, 3-5-ft., with very ornamental foliage similar to that of the *Canna*, with sprays of spikes of fragrant flowers in white, cream, orange and pinks to scarlet. Rich soil, a peaty loam with sand, and good proportion of rotted cow manure.

—**coccineum.** HEDY-2. Pkt. 25c  
One inch spikes of bright crimson flowers.

—**var. angustifolium.** HEDY-9. Pkt. 25c  
Leaves are shorter and broader than those of *H. coccineum*, spike is denser and shorter, with salmon-pink or brick-red flowers with a larger lip.

—**densiflorum.** HEDY-4. Pkt. 25c  
Spikes of white flowers.

—**gardenianum.** HEDY-10. Pkt. 25c  
Flowers in large cluster, dark yellow with orange markings, very pretty, 3-5 ft.

—**gracile.** HEDY-7. Pkt. 25c  
Flowers small greenish white.

—**spicatum.** HEDY-5. Pkt. 25c  
Spikes 1-ft. long, flowers white.

—**thrysisiflorum.** HEDY-6. Pkt. 25c  
Spikes, densely set with white flowers.

—**Mixed.** HEDY-8X. Pkt. 20c

**HEDYSARUM (hee-DIS-ah-rum)**

Perennial plants and shrubs belonging to the *Pea* Family, native of temperate regions of the northern hemisphere. Fine border plants, easily grown in light soil and a sunny location.

—**coronarium.** HEDS-1. Pkt. 40c  
(French Honeysuckle). Beautiful red flowers, HB\*, 3 ft.

**HELENIUM (he-LEE-ni-um)**

Mostly perennial plants with yellow flower heads, borne alone or in flat-topped clusters. Rich loamy soil best, and they make fine background planting in the border. Easily grown from seeds.

—**autumnale.** HELE-1. Pkt. 15c  
Two inch heads of flowers whose rays shade from lemon yellow to deep red, to 6-ft. tall.

**HELIANTHEMUM****(hee-li-AN-the mum)**

Sun-rose. N. American and Med. perennials thriving in dry limestone soils and full sunshine. There are many species all below 2 ft. and used in rock gardens, the border and for ground cover; flowers from July-Sept. Colors yellow, rose, white or purple.

—**obscurum.** HELM-1. Pkt. 25c  
Bright yellow flowers and spreading habit, H



doors in the winter. They last well when cut; plants bear flowers the third year.

—**corisicus.** **HELLE-2. Pkt. 35c**  
Winter or early spring flowering with green spotted flowers HP, 1½ ft.

## HFMEROCALLIS

(hem-er-oh-KAL-is)

A genus of mostly tuberous-rooted perennials called Day lily. The growing of them from seeds is a very interesting pastime much as is the case with Dahlias, etc. The new colors and forms resulting are of interest to the flower gardener.

—**Indian Hybrids.** **HEME-2. Pkt. 50c**  
This is one of the finest strains of Day Lilies to be had. Seed saved from the finest collection of named varieties in rich mixture of colors in yellow, cream, orange, golden, bronze, copper, crimson, pink, carmine, etc. Ready for delivery between July and Oct. Plant fresh seed and order now.

—**Pearless Blend.** **HEME-1. Pkt. 25c**  
(Golden Daylily). Very hardy, perennial, easily grown from seeds, blooming freely in one year; thrives in full sun but tolerant to some shade; sow seeds very early in spring or very late in the fall; color range in this large flowered strain includes buff, lemon, orange, copper, red to maroon and coppers.

## HERACLEUM

(her-ah-KLEE-um)

Herbaceous perennials used for bold effect bearing enormous umbels of minute white or pink-tinted flowers.

—**mantegazzianum.** **HERA-1. Pkt. 20c**  
A stately plant for background, 8-ft. Fine for specimen plants.

## HESPERANTHA

(hes-per-AN-thah)

Tender bulbous plants from S. Af., somewhat similar to *Ixia*, opening in the evening; the star-shaped flowers are fragrant; like sun, sandy loam and peat and must be treated as pot plants in the N.

—**baurii.** **HSPR-1. Pkt. 75c**  
The bright rose-red flowers are borne in a loose spike to 2 ft. in length and have yellow anthers, some white flowers; tender.

## HERMODACTYLIS

(her-mon-DAI-ti-lus)

Very closely related to *Iris*; they are quite easy and hardy; grow in light soil in sun, in cold climates it may be advisable to winter in cold frame.

—**tuberosa.** **HERM-1. Pkt. 50c**  
Widow or Mourning *Iris*. The outer segments of the flower are nearly black, the inner ones green, a very peculiar and attractive plant, easily grown from seed, 1-1½ ft., HP.

## HESPERIS (HES-per-is)

Hardy biennials and perennials of erect branching habit that bear white, rose or mauve-purple flowers in pyramidal spikes; excellent cut flowers, June-Aug. They are 1-3 ft. tall and their colorful display is enhanced by their sweet fragrance, give a sunny position in the border. Sow seeds outdoors in April or indoors in March, flowering the following seasons.

—**Matronlis, Violet.** **HESP-1. Pkt. 10c;**  
½ oz. 25c

(Sweet Rocket). Best grown as a biennial.  
—**White.** **HESP-2. Pkt. 10c;** ½ oz. 25c

## HETEROPAPPUS

(het-e-ro-PAP-pus)

Hardy border plants with azure-blue aster-like flowers in summer; somewhat similar to *Boltonia*.

—**Blaugritli.** **AST-56. Pkt. 20c**

## HEUCHERA (HEU-ker-ah)

Herbaceous perennials, usually dwarf, compact habit of growth; June-Sept., and valuable in low border or rockery; good loamy soil, sunny position, will produce mats of deep green, sometimes tinged with white or red from which rise slender stalks bearing airy clusters of bell-shaped flowers, excellent for cutting; plant seed early in the spring. Seed germinates best warm and in light.

—**glabella.** **HEU-1. Pkt. 20c**  
Western native species.

—**maxima hybrida.** **HEU-2. Pkt. 40c**  
Large flowers on stiff stems in white, deep rose and bright red.

—**SANGUINEA.** (Coral Bells). Bell-shaped flowers, ½-in. long with prominent coral colored calyx, colors pink, rose and red, stems 12-18-in., July-Aug. HP, 1½ ft.

—**Spittire.** **HEU-3. Pkt. 20c**  
Large rich scarlet flowers, very pretty.

—**splendens.** **HEU-4. Pkt. 20c**  
Vermillion colored flowers.

—**hybrida.** **HEU-5. Pkt. 20c**  
Many different colored hybrids.

## HIBISCUS (hy-BIS-kus)

Mallows flower in the late summer when other flowers are scarce, they like sunny positions, are quite hardy. The herbaceous group will bloom first season if started indoors very early; the genus is very large and variable. The annual kinds are very easily grown from seeds.

—**Avalon Hybrids.** **HIBS-1. Pkt. 20c**  
Milliaris crossed on *Coccinus* producing wonderful color variations, finest of all and different in every way; very hardy, color range from palest blush thru many tones of pink, then rose to reds, colors never before seen in *Hibiscus*; eyes are not common but are oddly rotated in deeper colors, long blooming season.

—**homabo.** **HIBS-8. Pkt. 50c**

—**militaris.** **HIBS-2. Pkt. 15c**  
Very hardy and rugged, making a good herbaceous hedge, sown in position; flowers bell-shaped of soft pink with rose striations, easily grown, 4-ft.

—**moscheutos, Hybrid.** **HIBS-3. Pkt. 15c**  
(Giant-Mallow Marvels). Very satisfactory perennials easily grown from seed and make a dandy addition to the hardy border. These hybrids have a fine color range from palest blush thru pure pink to rose with snowy white and pure crimson; center eyes common, 4-ft.

—**trionum.** **HIB-4. Pkt. 30c**  
Quick growing, long blooming annual with multitudes of big ivory-toned cup-blossoms centered with golden tassels, the petals patched violet at the bases; a very pleasing addition to the flower border, HHA, 2½ ft.

—**manihot.** **HIBS-5. Pkt. 15c**  
(Sunset or Golden Bowl). Spectacular

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—**capitatum.** **HYDO-1. Pkt. 25c**

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## HIERACIUM (hy-er-AY-shi-um)

Perennial composite plants with red, orange or yellow flowers, some of which are called Hawkweed. They are easily grown from seed; those listed are all attractive and useful border or rock garden plants. The leaves are in rosettes with the flowers in heads on erect stalks.

—**villosum.** **HIER-1. Pkt. 25c**  
A showy rock plant with yellow flowers and silvery leaves, HP, 1 ft.

## HOLLYHOCKS (Althaea rosea)

These are all perennial, except Indian Spring, and do their best in deep, rich, well drained soil and like a warm sunny situation sheltered from wind. Group plantings, not too large, make attractive color in the background plantings. Plant seed early, either indoors or out. We list only the very best strains.

### ANNUAL VARIETIES:

—**semi-double, Mixed.** **HOLY-1. Pkt. 10c;**  
½ oz. 45c

—**Single, Finest Mixed.** **HOLY-2. Pkt. 10c;** ½ oz. 45c

—**Indian Spring.** **HOLY-3. Pkt. 10c;**  
½ oz. 45c

Free flowering annual, semi-double rose and pink shades, 5-ft. tall.

### PERENNIAL VARIETIES:

—**Allegheny, Mixed.** **HOLY-4. Pkt. 10c;**  
½ oz. 45c

—**Begonia-Flowered.** **HOLY-15. Pkt. 15c**  
Large flowered, wide petals with pretty raised centers, very showy.

—**Imperator.** **HOLY-5. Pkt. 15c**  
Beautiful fringed flowers in pink to cerise salmon, 5-ft.

—**Triumph, Double Mixed.** **HOLY-6. Pkt. 15c**

Flowers are waved and fringed with a distinct branching habit unlike the tall Hollyhocks, these will make good showy displays in small groups as bush specimens, give 2-ft. space between plants, 5-10 in a group, 3-4 ft.

—**Colorado Sunset.** **HOLY-7. Pkt. 15c**  
A buff apricot and extremely attractive in groups.

—**Red Emperor.** **HOLY-8. Pkt. 15c**

—**Scarlet.** **HOLY-9. Pkt. 15c**

—**White.** **HOLY-10. Pkt. 15c**

—**Yellow.** **HOLY-11. Pkt. 15c**

—**Empress Strain.** **HOLY-12. Pkt. 15c;**  
½ oz. \$1.00

A Holland grown strain in mixed varieties of Chater's doubles.

—**Chater Blend.** **HOLY-13X. Pkt. 15c;**  
½ oz. \$1.00

A hand made blend of above varieties in a well balanced color combination.

—**Hollyhock Mixture.** **HOLY-14X. Pkt. 10c;** oz. 80c

Contains double, semi-double and single varieties, including every type.

## HORDEUM (HOR-de-um)

Ornamental grasses, both annual and perennial.

—**jubatum.** **HORD-1. Pkt. 10c**  
(Squirrel-tail, Grass). Hardy annual, heads 4-in. long, nodding, with beards 3-in. long, use as an ornamental grass and if cut just after the spikes emerge from the sheath and dried, they make excellent winter bouquets, 2-2½ ft.

—**gibbata.** **IBER-1. Pkt. 10c**  
(Gibraltar Candytuft). Evergreen perennial with light purple or lilac flowers in flat clusters.

—**jucunda.** **IBER-3. Pkt. 35c**  
Dwarf, 4-in. tall, perennial, pink flowers. Excellent rock garden plant.

—**sempervirens.** **IBER-9. Pkt. 15c**  
(UMBELLATA: Globe Candytuft). Annual, branching freely, to 15-in. tall. This is the popular garden Candytuft, with many varieties.

—**Giant-Hyacinth-Flowered.** **White.** **IBER-5. Pkt. 10c;** oz. 50c

—**Empress.** **IBER-6. Pkt. 10c;** ½ oz. 50c  
Large spikes of the purest white, erect habit.

—**Hyacinth-Flowered White.** **IBER-7. Pkt. 15c;** oz. 90c

Resected Florist Strain. This is a superior strain, 15-in. tall with enormous trusses of uniform blooms.

—**Best Mixed.** **IBER-8. Pkt. 10c;**  
½ oz. 40c

Umbellata, in all its colors.

## ILEX (Y-leks)

Holly. Evergreen and deciduous trees and shrubs having glossy leaves and brilliantly colored berries. Some are tender but they all are very ornamental for the garden or for lawn specimens. Easily grown from seed.

—**insignis.** **ILEX-1. Pkt. 25c**

—**fragilis.** **ILEX-2. Pkt. 25c**

## IMPATIENS (im-PAY-shi-enz)

(Touch-Me-Not, Snapweed). Interesting genus of greenhouse, border and wild garden plants, differing so in form and habit that only the spur formed by one of the three sepals and the way the ripe seed pod quickly curl at a touch to expel the ripe seed, reveals their relationship.

—**BALSAMINA.** (Golden Balm). This is the popular garden Balsam with its rose-shaped flowers in white, lavender, lemon-yellow, and many shades of red crowded closely to the leafy stems. Seeds sown indoors in April and set out in June will continue to bloom till frost when most flowers are gone. Require rich sandy loam, ample moisture, some shade and plenty of room space 2-ft. apart. Pinch off first buds and remove side shoots if a heavily flowered central spike is wanted; 2-ft. tall.

—**Double Camella-Flowered.** **IMP-1. Pkt. 15c**

Finest mixed, a beautiful flowered strain.

—**Double Rose-Flowered.** **IMP-2. Pkt. 10c;** ½ oz. 50c

The double flowers are clustered in the axils of the leaves on short stems giving the plant a rose-like appearance, white, rose and red shades; full sun, rich soil, plenty of moisture, 20-in.

—**Double Flesh-Flowered.** **IMP-13. Pkt. 35c**

Bush-flowered, HA, 1 ft.

—**Double Rose.** **IMP-14. Pkt. 35c**  
Bush-flowered, English grown strain, HA, 1 ft.

—**HOLSTI.** Red-striped stems and flowers varying from white to scarlet; grown as greenhouse plants, house plants and for summer border subjects. Tender perennial.

—**holsti.** **IMP-3. Pkt. 15c**

—**hybrids.** **IMP-4. Pkt. 15c**

—**Morganrode.** **IMP-5. Pkt. 50c**  
Large flowering, salmon.

—**Schottenglut.** **IMP-6. Pkt. 50c**  
Dark red, an especially fine plant.

—**SULTANI.** Best known greenhouse sub-

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ject. Long a favorite house plant. Easily grown and flowers indoors the year round. It can be set out in a partly shaded spot in the garden where it will form a bushy 15-in. plant, with an abundance of bloom.

—**Karminzwerg.** **IMP-7. Pkt. 50c**  
A new dwarf variety in a glistening carmine. Very choice.

—**Hybrids.** **IMP-8. Pkt. 20c**

—**arguta.** **IMP-9. Pkt. 20c**  
9-inch plants bearing violet flowers in autumn.

—**diffusum.** **IMP-10. Pkt. 20c**  
Small plant with funnel-like flowers in bunches.

—**urticifolia.** **IMP-11. Pkt. 20c**  
Robust, erect plant with large pink flowers.

## INCARVILLEA

(in-kahr-VIL-ee-ah)

Showy and fairly hardy perennials from China; plants produce terminal clusters of red or yellow flowers above the basal group of vivid green leaves; flowers tubular with a broadly expanded 5-lobed rim. Thrive in rich but light, well drained soil in sunny location. Plant seeds in spring or summer for flowering the following summer; in the N. give winter protection.

—**delavayi.** **ICAR-1. Pkt. 15c**  
2-ft. tall, rose-purple flowers with yellow tubes, very fine, late flowering perennial.

—**Olgae.** **ICAR-3. Pkt. 25c**  
Has sprays of pretty tubular rose-pink flowers and finely cut foliage, HP, 2½ ft.

—**grandiflora brevipes.** **ICAR-4. Pkt. 25c**  
One of the best for the Rock Garden; large brilliant crimson-purple gloxinia-like flowers and pretty foliage, 9-12", HP.

—**variabilis.** **ICAR-2. Pkt. 25c**  
An easy to grow annual ever-bloomer, flowers are trumpets reminding one of Gloxinias, blending of cream into pale rose, foliage fern-like, 2-ft.

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—**Olgae.** **ICAR-3. Pkt. 25c**  
Has sprays of pretty tubular rose-pink flowers and finely cut foliage, HP, 2½ ft.

—**grandiflora brevipes.** **ICAR-4. Pkt. 25c**  
One of the best for the Rock Garden; large brilliant crimson-purple gloxinia-like flowers and pretty foliage, 9-12", HP.

—**variabilis.** **ICAR-2. Pkt. 25c**  
An easy to grow annual ever-bloomer, flowers are trumpets reminding one of Gloxinias, blending of cream into pale rose, foliage fern-like, 2-ft.

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An easy to grow annual



—glauca. ISAT-1. Pkt. 15c  
Perennial, used in the border, flowers yellow in very large clusters, to 4 ft. tall.

### IXIOLIRION (ik-si-oh-LI-ri-on)

Siberian Blue Bells. Summer blooming bulbous plants with violet or blue lily-like flowers in flat heads. They are tender and bulbs must be lifted and stored indoors over winter.

—montanum. IXIO-1. Pkt. 50c

### JACARANDA (jak-ah-RAN-dah)

Tropical American trees or shrubs of Begonia Family. Easily grown from seed and some are used as street trees in the South but in the North only as greenhouse specimens.

—acutifolia. JAC-1. Pkt. 35c  
Sometimes listed as *J. mimosifolia*. Elegantly finely cut fern-like leaves and loose clusters of large blue flowers.

### JUNIPERUS

Juniper. Small and medium sized evergreen trees and shrubs and includes many of the finest ornamentals used in landscaping. Most of them are very hardy and they grow well most any where, except in shade and wet ground; a few are found, however, in marshes.

—pseudo sahiana. JUN-1. Pkt. 30c  
Small tree or shrub to 30 ft. with spreading branches, leaves gray or green, with whitish band.

—recurva. JUN-2. Pkt. 30c  
Erect shrub with thick and short branchlets.

### JASMINUM

Tropical or sub-tropical deciduous or evergreen shrubs, some climbers. They can be grown outdoors in the S. but are greenhouse plants in the N. where they are grown for their showy fragrant flowers; a good loamy soil is ideal.

—humile. JASM-1. Pkt. 25c  
A favorite plant in the S. for growing against pillars or fences, producing a vast number of flexible branches with small leaves and 1" long tubular yellow flowers, very fragrant; full sun, to 20 ft., half hardy shrub.

### KNIPHOFIA (nip-HOH-fi-ah)

(Torch-lily, Red-hot-Poker, Poker Plant and Flame-flower, also listed as Tritoma). Most striking garden plants for autumn flowers, with their dense cigar-shaped spikes of red or yellow tubular flowers rising like skyrockets above other plants; seed sown very early indoors will produce some flowers the first year. Where the climate is too severe during winter they may be dug up and stored in dry soil over winter; the species hybridize freely.

—caulescens. KNIP-7. Pkt. 30c  
A vigorous species with broad Yucca-like leaves and dense racemes about 6 in. long comprised of tubular flowers 1½ in. long, blood-red at first, turning golden yellow; one of hardier species and worth trying in the N., 4 ft., HP.

—gracilis. KNIP-2. Pkt. 15c  
Orange-red flowers.

—Early hybrids. KNIP-4. Pkt. 10c  
Perennial, American grown hybrids.

—Pfitzer's Hybrids. KNIP-5. Pkt. 15c  
Very large brilliant red.

—Uvaria Hybrid, gr. fl. KNIP-3. Pkt. 15c  
Most common grown species, large flowered, mixed, perennial.

—Vericres, Hybrids. KNIP-1. Pkt. 15c  
Creamy white and coral red flowers, early.

—Mixed. KNIP-6X. Pkt. 10c; ¼ oz. 80c  
A mixture of above together with other varieties as received.

### LAGURUS (lah-GEU-rus)

(Hares-tail or Rabbit-tail Grass). An annual ornamental grass, sometimes grown indoors as a pot plant and also for dry flowers in the winter, can also be used as an edging grass, 6-9-inches.

—ovatus. LAGU-1. Pkt. 15c; ¼ oz. 25c  
Clump forming with soft woolly heads up to 2 in. long, 1 ft., HP.

### LANTANA (lan-TAH-nah)

Shrubby plants resembling Verbenas to which they are related. They are tropical plants and natives from the Gulf States south and are fine greenhouse plants as well as for the garden. Being tender they must be started early indoors and protected against cold and frosts. Seeds are slow to germinate.

—Brunt's Dwarf Hybrids. LANT-1. Pkt. 15c  
(*L. camara*). Widely grown in the greenhouse and an excellent summer bedding plant. Low compact plants with pretty Verbenalike flower heads in white, rose, orange, scarlet, etc. They are perennials but tender in the N.

—French Hybrids. LANT-2. Pkt. 15c  
This is a French strain which is claimed to be extra choice. Otherwise same as above.

### LARKSPUR

Common name for the annual form of Delphinium. They are amongst the very best cut flower annuals and the greatly improved strains we are offering, it is hard to conceive a more effective cut flower. They are cool weather plants and for best results should be sown in the fall. In warm sections, such as Southern California, they are sown as early as August, broadcast where they are to bloom and if for the cut flower market, are sown thick like radishes and the entire plant pulled to go to market. For the home garden, on the other hand, plants are thinned out to the proper distance and allowed to branch normally for a more brilliant show of color. In the colder sections, seed should be sown broadcast in November in its permanent position in the garden. If very severe, a light mulch covering should be applied. Seed will, therefore, remain stratified and dormant throughout the winter months and with the spring thaws and first warmth will germinate and commence to grow. As Larkspur seed requires a chilling for best germination, this is the ideal treatment for best results in spring sowing.

—Cockade Type, Mixed. LARK-1. Pkt. 10c; oz. 80c; lb. \$9.00

A new type, recently introduced that has been especially liked by the florists and commercial growers. Tall, symmetrical plants, bearing long branches of full double florets; be sure to try this new type, this year, 4-ft. High class blend of all the varieties and colors.

—Pastel Shades. LARK-2. Pkt. 10c;

oz. 80c; lb. \$9.00  
Beautiful blend of soft pastel colors, correctly blended for cutting.

—Blue Cockade. LARK-27. Pkt. 15c

A rich lilac-blue, exquisite color.

—White Cockade. LARK-28. Pkt. 15c

A pure white in this beautiful type.

—Giant Imperial, Mixed. LARK-3. Pkt. 10c; oz. 80c; lb. \$9.00

Tall, upright, compact, basal branching in habit, they are most popular for cutting and garden display. Delphinium-like spikes of double flowers on 4-5 ft. stems, requiring but half the space of the old type.

—Blue Bell. LARK-10. Pkt. 15c

A beautiful mid-blue color.

—Blue Spire. LARK-5. Pkt. 10c;

oz. 80c; lb. \$9.00

Deep oxford blue.

—Cattleya. LARK-11. Pkt. 15c

A NEW late flowering rosy-lilac, highly recommended.

—Carmine King. LARK-6. Pkt. 10c;

oz. 80c; lb. \$10.00

Improved. A new very distinct improvement over the old Carmine King; holds its color under trying conditions and has the largest florets of the King type to date; deep carmine-rose.

—Coral King. LARK-13. Pkt. 15c

A bluish-white color.

—Daintiness Improved. LARK-14. Pkt. 15c

Deeper shade of lavender-blue with large and more fully double florets.

—Dazzler. LARK-15. Pkt. 15c

Early flowering bright carmine.

—Exquisite Pink Improved. LARK-16. Pkt. 15c

Rose-pink.

—Gloria Improved. LARK-18. Pkt. 15c

Deep rose on salmon.

—Lilac King. LARK-19. Pkt. 15c

Rich lilac.

—Lilac Queen. LARK-20. Pkt. 15c

A NEW rich lilac shading to lavender-blue.

—Lilac Spire. LARK-21. Pkt. 15c

—Los Angeles. LARK-4. Pkt. 10c;

oz. 80c; lb. \$9.00

Brilliant pink on salmon.

—Pink Perfection. LARK-12. Pkt. 15c

—Rosalind. LARK-22. Pkt. 15c

Rose suffused salmon.

—Sweet Lavender. LARK-23. Pkt. 15c

A NEW light lavender-blue; very pretty.

—The Empress. LARK-24. Pkt. 15c

A NEW rose-pink, shaded salmon, highly recommended.

—White King. LARK-25. Pkt. 15c

Pure white with large double flowers.

—White Spire. LARK-26. Pkt. 15c

A pure white, very popular.

PRICES ON ABOVE VARIETIES,

SEPARATE: Pkt. 15c; Oz. 80c;

¼ lb. \$3.25; lb. \$10.00

—Miss California. LARK-7. Pkt. 10c;

oz. 80c; lb. \$9.00

Beautiful deep rose on salmon.

—Tall Branching, Mixed. LARK-8. Pkt. 10c; oz. 70c; lb. \$7.00

A tall branching type, 4-ft. tall, that will especially suit large border plantings. It is a choice color blend.

—Larkspur, Mixed. LARK-9X. Pkt. 10c;

oz. 70c; lb. \$7.00

Made up of all colors and types, especially valued where one wishes to scatter the seeds in waste places or roadsides.

### LATHYRUS (LATH-i-rus)

Both vines and erect plants, annuals and perennials with tendrils and showy flowers in white, shades of red, yellow and purple. The perennials grow well in ordinary soil and will stand some shade while the annuals require deep moist soil and full sunlight; provide supports and if flowers are kept picked the blooming period will be lengthened.

—latifolius, Mixed. LATH-1X. Pkt. 10c;

oz. \$1.30

(The perennial Sweet Pea). Useful for training on pillars, fences, old trees, stumps and stone piles, 5-6-ft. Plants early in spring.

—Pink Beauty. LATH-2. Pkt. 10c;

—Red Beauty. LATH-3. Pkt. 10c;

—White Pearl. LATH-4. Pkt. 10c;

—LAVANDULA (la-VAN-dew-la)

Lavender. A fragrant plant grown for ornament in the garden and for its sweet scent when dried; the dried flowers are used to fill sachets and to perfume clothing and linens. It is grown commercially for the production of "oil of spike", aromatic vinegar and lavender water; not being hardy it is not grown much in northern gardens and must be protected over winter by mulching with coarse material. Set plants 2-ft. apart in their permanent location, in a dry, light limey soil and full sun; in rich or moist soils they do not do so well and lack the fragrance produced in an ideal location. Formally listed as *L. officinalis* and *L. vera*; annual, 2-ft.

—spica. LAV-3. Pkt. 10c; ½ oz. 70c

A more dwarf plant than true Lavender, with white leaves.

—Munstead Strain. LAV-1. Pkt. 15c;

¼ oz. \$1.00

Dwarf, deep lavender, 1-ft., a choice strain.

—Vilmorin Hybrids. LAV-2. Pkt. 10c;

¼ oz. 60c

French hybrids, beautiful flowers.

### LAVATERA (lav-ah-TEE-rah)

Fast growing, herbaceous annuals and shrubby perennials; the annuals are colorful with mallow-like flowers, easily grown. The perennials are especially suited to the West Coast section and all will bloom the first year with a little extra attention; do not transplant.

—arboresc. LAVT-1. Pkt. 10c

A shrubby biennial with dark veined magenta flowers, 6-10 ft. perennial grown as an annual.

—trimestris var., splendens, Mixed. LAVT-2. Pkt. 10c

Hardy annual, white and rose-pink, mallow-like flowers on large plant for show or cutting, 3-ft.

—Loveliness. LAVT-3. Pkt. 15c

A new and very highly recommended German variety, large rose flowers.

—thuringiaca. LAVT-4. Pkt. 25c

Light blue flowers, HP, 4 ft.

treated as annuals in the N. and some-

### LEONTOPODIUM

#### (le-on-tuh-POH-di-um)

—alpinum. LEON-1. Pkt. 25c  
The much prized Swiss Edelweiss (AY-del-vys). A tufted perennial with white woolly foliage and inconspicuous flowers, surrounded by floral leaves in star-like clusters; a most sought after subject for the alpine rock garden and sometimes grown in pots; requires rough sandy loam, plenty of room in rock pockets for its wide spreading roots and full sunlight; also good in border, best grown from very early planted seeds.

—White. LEON-2. Pkt. 25c  
Pure white flowers; everlasting; grows in open meadows at 12,000 ft.

### LEPTOSYNE (lep-TOS-i-nee)

Sometimes described under Coreopsis; have somewhat succulent, finely divided leaves and long stemmed yellow flowers; treat as annuals in the N. and sometimes grown under glass in the winter; easily and quickly grown from seeds, doing well in a light soil and a sunny location.

—maritima, gr. fl. LEPT-1. Pkt. 15c  
(Sea Dahlia). Leafy stem and flowers 3-in. across, yellow, 3-ft. tall, hardy annual.

—stillmanni. LEPT-2. Pkt. 15c  
Leafy stems, smaller than *L. maritima*, golden yellow flowers, hardy annual, 1-ft.

### LEUCADENDRON

#### (leu-kah-DEN-dron)

So. African trees or shrubs (Protea Family). Not hardy in the N. Grown outdoors in Southern Cal. and Fla. or under glass in N.

—argenteum. LEUC-1. Pkt. 25c  
(Silver Tree). One of the most noted trees of the Cape of Good Hope region where it reaches 30 ft.; interesting and showy plant with its narrow silvery white leaves closely set upon the stems; the dried leaves are used for decorative purposes. Packet contains about 20 seeds.

### LEWISIA (leu-IS-ah)

A genus of low growing perennials of the Portulaca Family with narrow fleshy leaves, often in rosettes, and pretty waxy or satiny cactus-like flowers, borne singly or in clusters. They are natives of the western states, perfectly hardy and should be given an open, well drained position in the rock garden and a mulch of leaves in the winter. Perfect drainage must be given them because of the thick starchy root which requires a period of rest.

—howelli. LEWS-2. Pkt. 25c

—rediviva. LEWS-1. Pkt. 35c

This is spoken of as "one of the finest four rock garden plants in the world" and was Lewis and Clark's best find. State flower of Mont. Has a dense rosette of narrow leaves above which rise beautiful silky short stemmed blossoms 1½-in. across, vary in color from white to deep rose.

### LIATRIS (ly-AY-tris)

Perennial plants being borne close against long wand-like spikes, very attractive all summer and into autumn, effective when massed in the border. Easily raised from seed and easily transplanted.

—spicata. LIAT-1. Pkt. 20c

Long spikes of fluffy purplish-rose flowers, hardy perennial, 5-ft.

Best in light rich sandy loam rather dry than wet.

### LIGUSTRUM (li-GUS-trum)

Privet. Deciduous or evergreen shrubs native of Europe, Asia and Australia. Useful as hedges and very ornamental. Some are not hardy in the N., especially the evergreen species. Easily grown from seed.

—confusum. LIGS-1. Pkt. 25c

### LILIUM

(Lily). Growing Lilies from seed has become a very popular hobby with flower growers; very fine bulbs can be easily grown from seed, sowing them in flats of good garden soil, sand and leaf mold, equal parts and covering ¼-in. deep; seed may be sown anytime, the growth is mostly root growth the first year, transplant out the second and by the third year good sized bulbs may be had, with many seedlings over blooming within a year. Some sorts germinate readily, others longer and some of the hybrids very variable. We will mark offerings with planting symbols, as follows: (A) Sow March or April, outdoors or month earlier indoors, germinate in 3-6 weeks, transplant following spring to nursery row. Also can be grown as in next culture. (B) Best to start in frame or greenhouse in early spring or outdoors in the S. Germination 3-6 weeks, carry seedlings over in frame or cool house the first winter, transplanting them out in the spring. (C) April-June outdoors in well made seed bed, 2-5 months to germinate with top growth not appearing till following spring, transplant second year. (D) Plant outdoors in late fall, Nov-Dec. in carefully prepared seed bed, germination and top growth the 2nd spring and transplant 3rd or 4th spring according to growth. (E) Usually hybrids of very variable reaction. The easy ones follow (A) or (B) and the hard ones are best under (C). Note proper culture under each variety description.

NOTE: We can supply Lily Bulbs on almost every variety, either in the spring or the fall. Ask for the special lists.

Due to the continued unsettled conditions in Europe, we may not be able to offer as large a list in seeds as we should, but each week brings in a new variety so that we hope to be able to extend the list considerably before the season is over.

NOTE: We can quote on quantities of Lily seed but due to the uncertainty of delivery we would rather you inquire first—just drop us a postal.

### LIMNANTHES (lim-NAN-theez)

Meadow Foam. Formally in the genus Floerkea.

—douglasi. LIMN-1. Pkt. 20c

Hardy annual plant with finely cut yellowish-green leaves and fragrant white flowers, shaded at the base into pink and yellow. This attractive little plant grows in masses in low damp places and is a lovely flower in the wild garden; easily grown from seed.

—latifolium. LIMO-1. Pkt. 15c; ½ oz. 95c

Perennial with immense lavender-purple heads, best in a dry location, 2-ft. Especially valued for floral designs.

SINUATUM: Biennial or perennial, grow as a hardy annual; leaves form a low rosette at base of the stiff angular branching flower stalk. These are very popular for dried flowers.

—bonduelli. LIMO-3. Pkt. 10c; oz. 65c

Golden yellow flowers, 2-ft.

—caspium. LIMO-10. Pkt. 15c

A dwarf species suitable for the sunny rock garden, with very small leaves and branching stems bearing many pale-lilac flowers. HP. 6-in.

—centi-gale. LILY-20. Pkt. 50c

English cross of *LL. centifolium* and Regale, which gives fine flowers of the Regal type, 3-5 ft., HP. Culture (A).

—Centifolium. LILY-30. Pkt. 50c

—Crow Hybrid. LILY-32. Pkt. 50c

A high class hybrid from a Lily hybridizer of note.

—Davidii x Maxwell. LILY-29. Pkt. 50c

—formosanum, Price's Variety LILY-16. Pkt. 50c

The dwarf form of this easy and popular species which flowers from seed the first year; white trumpet, 1½ ft., HP. Culture (A).

—giganteum. LILY-1. Pkt. 20c

In woodland, in moist loam rich in leaf mold, this magnificent lily is entirely happy and hardy. The stem is very thick and as much as 12 ft. high, with large glossy green leaves; flowers are trumpet-shaped, 8 in. or more in length, tinged green outside and striped and splashed with red-purple within. Seed is of slow germination and some time is required for plants to develop into flowering stage. Culture D.

—Gloriosa superba. LILY-31. Pkt. 50c

—gloriosum. LILY-13. Pkt. 75c

A beautiful new German hybrid lily, 30"-60" tall, flower like *L. regale*, white. Highly recommended.

—henryi. LILY-26. Pkt. 35c

—jankae. LILY-22. Pkt. 50c

An extremely rare species from Bulgaria, sometimes regarded as a variety of *L. Carniolicum*. The flowers are bright yellow, unspotted, Culture (D), 3 ft., HP.

—longiflorum praecox. LILY-25. Pkt. 35c

Pure white flowers exactly like longiflorum White Queen except that this has 4-5 flowers per stem. Easy from seed, Culture B.

—martagon. LILY-4. Pkt. 25c

(Turks Cap). Purple with dark brown spots, 3½-ft. Culture C.

—martagon dalmaticum. LILY-24. Pkt. 30c

Moderate sized Turk'scap flowers in deep maroon, almost black; these are the easiest of the slow germinating lilies. Culture (D) is best, 3 ft., HP.

—martagon x Hansonii. LILY-23. Pkt. 30c

A very important group of hybrids, very hardy, vigorous and easy in most gardens; variable in color, yellows, reds and near pinks.

—martagon album x Hansonii. LILY-15. Pkt. 50c

The white form of *L. martagon* is much more easier in gardens than the colored varieties and these crosses should give especially fine hybrids.

—macrophyllum. LILY-5. Pkt. 25c

(



—**macrocarpum.** LOMA-1. Pkt. 20c  
Native Mont. species, white flowers, 10-14 inches, May.

### LONAS (LOH-nahs)

—**inodora.** LONA-1. Pkt. 20c  
The Golden. True golden yellow, a very good plant for edging and bedding, annual; use with Ageratum for yellow combination; also fine for winter dried flowers. Easily grown in any type of soil, space 10-in. apart for cutting, closer for edging or bedding, mid-summer bloom, 2-ft.

### LONICERA (loh-NIS-e-rah)

Very popular and easy shrubs and vines, called Honeysuckle. Quite easy and prompt from seed and quickly develop into flowering plants.

—**syringantha.** LONI-1. Pkt. 50c  
Erect growing with slender branches, small leaves of dull bluish green and a profusion of fragrant rosy-lilac flowers. Hardy, Fragrant.

—**ciliosa.** LONI-2. Pkt. 25c  
Western species.

### LOTUS

The genus is confused with the common name of water plants called Lotus, which are Nymphaea. The correct genus belongs to the Pea Family. They are native to So. Europe.

—**tetragonolus.** LOT-1. Pkt. 15c  
Winged Pea, Asparagus Pea. A creeping annual leguminous plant with purplish-red flowers and pods, which are edible when young. They thrive in sunny, dry locations and valuable for ground cover and on banks.

### LUCULIA (leu-KEU-li-ah)

Tender shrubs from the Himalayas having large leathery leaves and showy corymbs of white, rose and red flowers; easily grown under glass in moderate temperature and bloom through the winter. They can be set outdoors during the summer where they make attractive plants.

—**gratissima.** LUCU-1. Pkt. 25c  
The most reliable species, coming true from seed.

### LUFFA (LUF-ah)

Lootah. Tropical climbing plants with large white flowers and cylindrical or oblong fruits. When ripe they have dry papery shells which contain a network of strong fibers which is commonly called "dish cloth" and is used for washing purposes. Culture same as for gourds.

—**Green Snake.** LUFF-1. Pkt. 10c  
Very long fruits.

—**acutangula.** LUFF-2. Pkt. 10c  
Dish Cloth. Large fruits.

—**cylindrica macrocarpa.** LUFF-3. Pkt. 10c

### LUNARIA (leu-NAY-ah)

There are two important kinds, a biennial and a perennial that are used for dried flowers in this genus. The seed pods are flat and when matured, these open up, making a very pretty spray for use in bouquets or the entire plant can be used as a bouquet; the flowers are white to crimson.

—**biennis, Violet.** LUNA-1. Pkt. 10c; ½ oz. 45c

Honestly, Biennial, with shining silvery seed pods for winter decoration, 2-ft., Violet flowers.

—**White.** LUNA-2. Pkt. 10c; ½ oz. 45c

—**Dark Crimson.** LUNA-3. Pkt. 10c; ½ oz. 45c

### LUPINUS (lu-PI-nus)

The flowers, shaped like those of the peas, are borne in great profusion on long stemmed spikes; both annual and perennial sorts are excellent for display in the border; sun or partial shade and requires moisture. Blooms May and June and if cut back will produce second crop of flowers, sow in open ground as they resent moving, being tap rooted.

—**arbus, Lavender Tree.** LUP-1. Pkt. 15c  
Tender Perennial shrub growing man-high with lavender flowers.

—**Yellow Tree.** LUP-2. Pkt. 15c

—**aridus.** LUP-12. Pkt. 50c  
A rock garden dwarf, very rare in cultivation and a scarce species.

—**hartwegii, Giant King, Blue.** LUP-3. Pkt. 15c

Annual, 3-ft. this is a recently introduced strain with larger flowers, closer spaced on longer spikes and in more distinct colors. Oxford blue.

—**Mixed.** LUP-4. Pkt. 10c; oz. 70c

Annual, 2-ft. in blue shades, white, yellow and rose.

—**namus, Blue.** LUP-5. Pkt. 10c; oz. 60c

Small seeded type, native of California, 1-ft. annual. Blue.

—**Cruikshanki.** LUP-7. Pkt. 15c

White shaded yellow and purple, annual.

—**Iyalli.** LUP-13. Pkt. 50c

A greatly admired species for the exposed sunny rock garden, easily grown but not long lived, HP.

—**polyphyllus, Mixed.** LUP-8. Pkt. 15c; oz. 50c

Tall perennial with winged flowers blooming most of the summer, colors purple, white and rose.

—**Russell.** LUP-9. Pkt. 25c; oz. \$2.75

The most beautiful of all hardy Lupinus, a rare and showy combination of color with bright pastel colors predominating.

—**subcarnosus.** LUP-10. Pkt. 10c; oz. 45c

Texas Blue Bonnet. Small seeded, strong bushes, 15-in. tall bearing in June, massive flower spikes closely set with large deep blue flowers.

—**Alaska Lupin.** LUP-11. Pkt. 15c

Blue Lupin, collected on Kodiak Island, and not yet identified but no doubt L. Arcticus, which is beautiful. 18-in., color cream, pinkish lavender, magenta and shades of purple and blue.

### LUTKEA (LUT-ke-a)

Very finely cut foliage suggesting a mossy saxifrage, forming green carpets yards across, with short spikes of bloom. Quite easy on the rock garden on the shady side of a large rock.

—**pectinata.** LUTK-1. Pkt. 25c

Tiny spikes of pale yellow over a mat of velvety green, HP, 4-6".

### LYCHNIS (LIK-nis)

Brilliantly colored flowers and easily grown from seed; if sown early indoors

most of the species will flower in June and July, ordinary garden soil and a fairly dry location with plenty of sun. They are related to the genus Silene. The dominant color of the species is red and the flower 5-petaled.

—**coeli-rosa.** LYCH-1. Pkt. 10c  
Rose of Heaven. Crimson-red, a new variety and color. Free flowering annual, 1-ft.

—**Mixed.** LYCH-2. Pkt. 10c; ¼ oz. 25c

Rose of Heaven. Rose-red, red, white.

—**coronaria.** LYCH-3. Pkt. 15c  
Mullein Pink, Rose Champion, Dusty Miller. Much branched biennial or perennial with wide woolly leaves and large crimson flowers, terminating each branchlet. Other plants are also called Dusty Miller, see Centaurea.

—**viscaria splendens.** LYCH-4. Pkt. 10c; ½ oz. 30c  
Hardy perennial, fiery red flowers, 15-in. tall, very beautiful.

### LYSIMACHIA (ly-si-MAY-ki-ah)

Loosestrife, which is also used for the genus Steironema, both requiring similar treatment and moisture situations. Perennial, bloom in summer, very pretty.

—**punctata.** LYSM-1. Pkt. 20c

Spotted Loosestrife. Dainty golden yellow flowers in whorls on strongly upright growing plants; useful in shady, poor soils, fl. stems 3 ft. long, June-July, HP.

—**ramosa.** LYSM-2. Pkt. 30c

### MACHAERANTHERA

—**tanacetifolia.** MACH-1. Pkt. 20c  
Takoke Daisy. Most desirable for edging, bedding and cutting, best of the Blue Daisies. Flowers large blue-lavender with little golden centers and good length stems; foliage fern-like. Long blooming period, mid-June to Nov., sow seeds early and to get even germination place seeds in the refrigerator for a week, 20-in.

### MACLEAYA (mah-KLAY-rah)

—**cordata.** MACH-1. Pkt. 15c  
Plume Poppy or Tree Calandine. Formerly classed as Bocconia cordata. A tall plant with feathery sprays of small flowers held above the grayish-green leaves. Makes an effective background or specimen plant, perennial, 6-ft.

—**japonica.** MACH-2. Pkt. 15c

—**microcarpa.** MACH-3. Pkt. 25c

Similar to M. cordata in habit but seed vessels purple, HP, 6 ft.

### MAGNOLIA (mag-NOH-li-ah)

Deciduous and evergreen shrubs and trees; many are very attractive when in bloom having very large flowers. Most of them are not hardy in the North and especially the evergreen sorts. They are difficult to transplant and thus when grown from seeds, more liable to come established. Grow in rich porous, moderately moist soil, preferring a sandy or peaty composition; seed can be started in pots and when established moved to their permanent location.

—**Campbelli, Mixed.** MAGN-1. Pkt. 25c

Flowers in white, pink and red, and purple outside, measuring 10 inch across, grows to 70 ft. tall and hardy from Va. southward.

—**Red.** MAGN-2. Pkt. 25c

—**White.** MAGN-3. Pkt. 25c

—**Pink.** MAGN-4. Pkt. 25c

—**globosa.** MAGN-5. Pkt. 25c

Dwarf handsome tree with pretty white flowers.

—**obovata.** MAGN-6. Pkt. 25c

—**wilsoni.** MAGN-7. Pkt. 50c

Shrub or small tree with moderate-sized leaves and fragrant white cup-shaped flowers 3-5 in. across, June, 20 ft.

—**cambrica.** MECO-3. Pkt. 20c

Welch Poppy. Perennial, 1½-ft., much-cut leaves with silvery green beneath and large solitary pale yellow Poppy-like flowers.

—**aurantiaca fl. pl.** MECO-12. Pkt. 35c

The Welch Poppy unlike the Asiatic species, is very easily grown under average garden conditions; makes dense tuft of bluish leaves 6 in. high above which are borne singly poppies 2 in. across in great profusion; in this form they are of rich orange fully double with some coming single, 1½ ft., HP.

—**horridula.** MECO-11. Pkt. 25c

A very variable species with 5-petaled flowers of light to dark blue, pinkish or purplish, borne singly on very short stems; usually, but not always, biennial, 8 inches.

—**nepalensis.** MECO-6. Pkt. 20c

Yellow Himalayan Poppy. Large lemon colored flowers in racemes, 4-6 ft. tall, HP.

—**rubra.** MECO-9. Pkt. 25c

Same with purple Poppy-like flowers.

—**simplicifolia.** MECO-7. Pkt. 25c

Biennial with solitary Poppy-like clear blue flowers, 3 inches across, rising from the tufted rosette of leaves.

—**villosa.** MECO-10. Pkt. 50c

Used to be listed as Cathartea villosa. Heart-shaped leaves covered with white hair; golden-yellow poppy-like flowers on stems 1½ ft. long.

—**wallachi.** MECO-8. Pkt. 25c

Satin Poppy. 4-6 ft. biennial forming a mound of finely cut, silvery foliage, and bears pale blue flowers 2-in. across.

—**criniflorum.** MESE-2. Pkt. 25c

Livingstone Daisy. New. Very rich flowering in beautiful bright and varied colors.

—**crystallinum.** MESE-3. Pkt. 15c

Now Cryophytum crystallinum. Ice plant, an easily grown annual and used for a ground cover in mild climates and in porch or window boxes in the N.

—**tricolor.** MESE-4. Pkt. 15c

Annual.

—**verna.** MIBO-1. Pkt. 50c

A rare tiny flowering grass for rock gardens, especially for carpeting small bulbs.

—**Double Giant Excelsion, Balls No. 2.** STOK-7. Pkt. 25c

Each plant produces one large flowering

spike, white tinged with pink, greenhouse strain, 3-ft.

—**Ball's No. 14.** STOK-8. Pkt. 25c

Same as above with deep rose-pink flower.

—**Gardenia.** STOK-9. Pkt. 25c

Large single pure white flower.

—**Mixed.** STOK-11X. Pkt. 25c

The very best blend of single flowered varieties.

—**bicornis.** STOK-20. Pkt. 10c; ¼ oz. 30c

Evening Stocks. A hardy annual, 15-in. high, sweetly fragrant after twilight hours or after a shower; small lilac flowers, July-Sept. Sow seeds indoors or plant out early in May.

### MATRICARIA (mat-ri-KAY-ri-ah)

Mostly annuals (Composite Family) with a few biennials and perennials, foliage freey cut with small flower heads. They are called Matricary in old time gardens. They are easily grown from seed; used in the border and are around 2-ft. tall.

—**capensis alba plenissima.** MATI-1. Pkt. 20c

Feverfew. Also listed as Chrysanthemum parthenium. A perennial but grown as an annual. 2-ft. white bouquets, used especially for mixing in bouquets of other flowers similar to Gypsophila.

—**eximia gr. fl. Ball's Double.** MATI-2. Pkt. 25c; ¼ oz. \$1.00

One of the best white cut flowers, 20-in. tall.

—**Golden Ball.** MATI-3. Pkt. 20c; ¼ oz. 85c

This variety forms a dwarf dense bush of over 12-in. in height covered with rich golden yellow ball-shaped flowers. It is of great value for pot culture and making up floral sprays.

—**Silver Ball.** MATI-4. Pkt. 25c

Same as Golden Ball but with white double ball-shaped flowers.

### MAURANDIA (mau-RAN-di-ah)

Perennial climbing plants of slender habit, native of Mexico and belonging to the Figwort Family. They are tender and can be handled as tender annuals for summer baskets or for winter flowering vines. Thrive in fibrous loam with leaf mold and some cow manure. Fine also for trellis.

—**scandens.** MAUR-1. Pkt. 25c

### MECONOPSIS (me-kon-OP-sis)

Annuals, biennials and perennials (Poppy Family). They generally require a cool moist summer and a rich warm sandy loam in a sheltered partial shady position. They make an attractive group in the border. The annuals should be started early indoors and set out after frost danger is over; the perennials are best carried through the summer in pots in cold frame and set out in Sept.

—**baileyi.** MECO-1. Pkt. 25c

Perennial, very pretty with large blue Poppy-shaped flowers, for a cool place in the rock garden, June-July, 15-in. tall.

—**betonicifolia.** MECO-2. Pkt. 25c

Perennial, to 6-ft., blue or bluish-violet flowers, 2-in. across in flat top clusters and one of the finest blue flowers in cultivation but requires a good flower grower in the E. States. Shelter it from intense heat and drying winds and give applications of liquid manure during its flowering season.

—**cathartii.** MECO-5. Pkt. 20c

Perennial, golden yellow flowers, 2-3-in. across.

—**cambrica.** MECO-3. Pkt. 20c

Welch Poppy. Perennial, 1½-ft., much-cut leaves with silvery green beneath and large solitary pale yellow Poppy-like flowers.

—**aurantiaca fl. pl.** MECO-12. Pkt. 35c

The Welch Poppy unlike the Asiatic species, is very easily grown under average garden conditions; makes dense tuft of bluish leaves 6 in. high above which are borne singly poppies 2 in. across in great profusion; in this form they are of rich orange fully double with some coming single, 1½ ft., HP.

—**horridula.** MECO-11. Pkt. 25c

A very variable species with 5-petaled flowers of light to dark blue, pinkish or purplish, borne singly on very short stems; usually, but not always, biennial, 8 inches.

—**nepalensis.** MECO-6. Pkt. 20c

Yellow Himalayan Poppy. Large lemon colored flowers in racemes, 4-6 ft. tall, HP.

—**rubra.** MECO-9. Pkt. 25c

Same with purple Poppy-like flowers.

—**simplicifolia.** MECO-7. Pkt. 25c

Biennial with solitary Poppy-like clear blue flowers, 3 inches across, rising from the tufted rosette of leaves.

—**villosa.** MECO-10. Pkt. 50c

Used to be listed as Cathartea villosa. Heart-shaped leaves covered with white hair; golden-yellow poppy-like flowers on stems 1½ ft. long.

—**wallachi.** MECO-8. Pkt. 25c

Satin Poppy. 4-6 ft. biennial forming a mound of finely cut, silvery foliage, and bears pale blue flowers 2-in. across.

### MESEMBRYANTHEMUM

(mes-em-bri-AN-the-mum)

These are tender plants, best grown in dry, gritty, well drained soil, care being used to water them from below; usually started indoors; low growing, fleshy, succulent plants, many of them having striking, glistering ice-like points on the foliage; they are natives of hot, dry barren parts of S. Africa. They are tender in the N. and when grown outdoors they must be wintered in a cool, well ventilated, greenhouse. In California and Florida, a number of them are grown in the open and due to the dry climate in the West, they do especially well. They make nice pot plants and should be given a light dry gritty soil with the best of drainage.

—**criniflorum.** MESE-2. Pkt. 25c

Livingstone Daisy. New. Very rich flowering in beautiful bright and varied colors.

—**crystallinum.** MESE-3. Pkt. 15c

Now Cryophytum crystallinum. Ice plant, an easily grown annual and used for a ground cover in mild climates and in porch or window boxes in the N.

—**tricolor.** MESE-4. Pkt. 15c

Annual.

### MIBORA

—**verna.** MIBO-1. Pkt. 50c

A rare tiny flowering grass for rock gardens, especially for carpeting small bulbs.

## MARIGOLDS

We try to list every variety of Marigold that has any real merit and have dropped old varieties that have been replaced by newer and improved varieties.

The AFRICAN MARIGOLDS are strong feeders requiring plenty of water, therefore plant it in the richest, most favorable section of your garden. Seeds may either be sown where the plants are to remain or they can be started indoors and transplanted out in late May. Give the plants plenty of room, in most cases about 3-ft. apart.

The FRENCH MARIGOLDS are very light feeders and require a limited amount of

water; too strong feeding and watering will throw them to foliage at the expense of the flower; do not fertilize this type. Seed can be started indoors, but as a rule better success will be had by planting the seeds early in May, where the plants are to remain, thinning them out to one plant.

Marigolds are fairly hardy and therefore they should be planted rather early in the spring. There are many wonderful plants in both types that have been developed recently and we will always offer the best as they are introduced and we especially urge every flower grower to try at least a half dozen Marigolds every year.

### TALL AFRICAN NOVELTY TYPES.

AFRICAN MARIGOLDS. These are the large flower type, the plants usually 3-5-ft. high and the flowers up to 4-5-in. across. They make excellent displays in the flower border, can be used as hedges and produce great amounts of cut flowers. It comes in odorless foliage in some varieties.

—**Treasure Chest.** MARY-53. Pkt. 15c; ½ oz. 80c

large Chrysanthemum flowered types with a wide range of color and bloom forms, all early flowering.

—**Crown of Gold.** MARY-1. Pkt. 10c; ½ oz. 60c

Collarete type with odorless foliage, golden yellow flowers.

—**Gigantea Sunset.** MARY-2. Pkt. 10c; ½ oz. 80c

Giant Flowered. Mixed. Huge flowers 5-in. across, colors orange, yellow and primrose, 3½-ft.

Full double huge deep orange flowers, 3½-ft.

—**Orange.** MARY-3. Pkt. 15c; ½ oz. \$1.20

—**Golden Glow.** Mary-4. Pkt. 10c; ½ oz. 60c

Golden Yellow, Odorless foliage.

—**Mission Giants, Goldsmith.** MARY-5. Pkt. 10c; ½ oz. 90c

A new personality in Marigolds of exceptional merit. Plants about 1½-ft. with an extra amount of vigor and under field conditions the plants, which are



—excelsa. MICH-2. Pkt. 30c  
—lanuginosa. MICH-3. Pkt. 30c

**MELIA (MEE-li-ah)**

Read-tree. Deciduous or evergreen trees and shrubs native of tropical Asia and Australia. They can be grown only in the South.

—azedarach. MELA-1. Pkt. 35c  
China-berry or Umbrella-tree. Grown in the South where it stands a few degrees of frost; grows to 50 ft. with graceful pinnate foliage, fragrant lilac flowers borne in loose panicles, followed by yellow oval fruits that remain for a long time.

**MELOTHRIA (me-LOH-three-ah)**

Climbers of the Melon Family with small white or yellow flowers and attractive small fruits; treat same as for Gourds.

—scabra. MELO-1. Pkt. 15c  
A perennial climber best grown as an annual, start seeds indoors setting out in May.

**MIGNONETTE**

(Bot. Reseda, re-SEE-da, odorata).

These sweet scented plants are excellent for pots or boxes, beds and borders and the improved varieties make fine cut flowers; they are also excellent for bees, yielding a large amount of excellent honey; full sun or partial shade and best in moderately rich soil, sow seeds in open ground as they develop rapidly and resent moving; successive sowings will furnish nial it is best to grow them as annuals, starting seeds as early as the first of May, 6-15-in. tall.

—Allen's Defiance. MIG-1. Pkt. 10c; 1/4 oz. 25c  
Individual florets are of immense size, compact plants, very fragrant.

—Machet Giant Flowering. MIG-2. Pkt. 5c; 1/4 oz. 40c  
This is a special straining pyramidal growth.

—Machet Golden Goliath. MIG-3. Pkt. 15c; 1/4 oz. 40c  
Special strain. Golden yellow flowers, large and very fragrant.

—Machet, Red Goliath. MIG-4. Pkt. 15c; Special strain. Large red flowers.

—Machet New York Market. MIG-5. Pkt. 15c; 1/4 oz. 40c  
Special Strain.

—Machet, Special Mixed. MIG-6. Pkt. 10c; 1/4 oz. 35c  
—grandiflora Improved. MIG-7. Pkt. 10c; 1/4 oz. 35c

**MIMULUS (MIM-eu-lus)**

Tender annuals and perennials, having large oddly shaped 2-lipped flowers of brilliant colors; excellent for boxes, baskets, house plants or for the border as well as for the greenhouse, the more tender sorts when grown outdoors should have some shade and protection from the wind and plenty of moisture. Germinate the seed at around 60 degrees. They are all grown as annuals.

—cardinalis. MIM-1. Pkt. 15c  
—cupreus (tigrinus) Hybrid. MIM-2. Pkt. 15c

—Espana. MIM-3. Pkt. 15c  
Purple-garnet, yellow throat.

—guttatus. MIM-6. Pkt. 25c  
More or less prostrate with brilliant long yellow flowers; hardy. From the Rocky Mountains.

—jewisii. MIM-7. Pkt. 25c  
Large red flowers at 1-2 ft. Requires constant moisture and as cool as possible. Abundant at Logan Pass in Glacier National Park. A perennial growing masses the size of a wash tub along cold streams.

—Mixed. MIM-5X. Pkt. 10c  
All varieties mixed.

**MIRABILIS (my-RAB-i-lis)**

Four O'Clocks. Tender biennials grown best as an annual in the North, bushy plants with attractive red, pink, white, lilac and yellow flowers, flowers opening in the P. M. on sunny days, July to frost; space plants 2-ft. apart, 2-3 ft. tall. They make the best for border or bedding. For a hedge, plant them 1-ft. apart and in the border 2-ft. apart. Best to sow seed in the open ground about middle of May, they do not stand frost.

—jalapa, Mixed. MIRA-1. Pkt. 10c; oz. 25c  
Mixed Four O'Clocks in all the colors.

—Dwarf Variegated. MIRA-2. Pkt. 15c  
Dwarf growing with variegated leaves, mixed colors.

—longiflora, White. MIRA-3. Pkt. 10c  
Much larger flowers, sweet scented.

—Violet. MIRA-4. Pkt. 10c  
Bright rose blossoms in trumpet-trumpet form, each long-tubed blossom rising from a second "flower" of the same vivid rose. Showy, and unusual. A free bloomer.

—Mixed Four O'Clocks. MIRA-6X. Pkt. 10c  
All types mixed.

**MORAEA (moh-REE-ah)**

African Iris. Bulbous Irids from Africa, many new to civilization, flowering in spring in wide color range, culture similar to Freesias.

Those that have rhizomatous roots are called DIETES and are treated the same as Iris. Not hardy in the N. but can be as a pot plant and grown indoors in winter; in the S. they can be grown outdoors.

—belemoides. MORE-1. Pkt. 25c  
Grows on rocks at 12,000 ft., violet colored flowers and should be good in the rock garden.

—catanulata. MORE-1. Pkt. 25c  
Dietes. Low growing variety, broad foliage, prostrate habit, if stalked will grow 4-6 ft. Flowers waxy white.

—Iridoides johnsoni. MORE-2. Pkt. 25c  
Robust grower, soon forming large clumps, flowers 4" across, purest white with lavender and orange markings, blooming once every 7-10 days thruout the year (Dietes).

—Oakhurst Hybrids. MORE-3. Pkt. 25c  
Cross between two rare species and a distinct improvement, flowers over 2" across resembling miniature Japanese Iris, color pleasing shade of ivory, marked with bright orange or yellow and violet (Dietes.)

—polystachia. MORE-4. Pkt. 25c

**MOLUCCELLA (mol-eu-SEL-ah)**

—laevis. MULO-1. Pkt. 15c  
Bells of Scotland. The branching stems are closely set in elongated hyacinth-fan-like with big bell-calices of pale, translucent green and within each calyx lies a curiously formed little white flower. Its a fine cut flower or the spikes can be dried for winter. Easily grown, does well in dry soils, perennial.

**MONARDELLA**

(mon-ahr-DEL-ah)

Annual and perennial plants grown in the rock garden and native of Calif., having fragrant foliage and two-lipped flowers; light sandy soil best.

—villosa. MONA-1. Pkt. 50c  
Pale lavender to light purple, growing well on hot, dry stony soils; intensely aromatic and ornamental as well, 6", HP

**MORINDA (moh-RIN-dah)**

Trees, shrubs and vines of Madag. Family. They are tropical plants and can be grown only outdoors in the far South or as greenhouse specimen in the North.

—betenocoides. MORI-1. Pkt. 50c

**MUSCARI (mus-KAY-ry)**

Grape Hyacinths. They are quite easily grown from seeds sown in the fall or spring; fully hardy and indifferent as to soil but not wet locations.

—comosum. MUSC 1. Pkt. 50c  
A very curious species, 1 ft., stems bearing widely spaced bell-shaped flowers, greenish-brown, the upper very small, purple. Later than most species, HBB.

**MYOSOTIS (my-oh-SOH-tis)**

For-Get-Me-Nots. They all prefer cool locations, partial shade and plenty of water in the soil, they are fine as edging plants and in boxes and baskets or bedding. In combination with Pansies or English Daisies, they make an effective display; also used in the rock garden or for ground cover in the rosery; while they are mostly perennials, they all need winter protection in the North where they can be carried over. Sow seeds early, 2-ft.

—alpestris, A. Fischer. MYOS-1. Pkt. 30c  
Very large flowered, deep blue, 8-in. This is a hybrid and correctly listed as Annamaria Fischer.

—oblongata perfecta. MYOS-2. Pkt. 30c  
A fine winter flowering type, dark blue.

—Royal Blue. MYOS-3. Pkt. 15c  
Dark blue, pretty, 12-inches.

—Gerda Seager. MYOS-4. Pkt. 20c  
Blooms 6-8 days earlier.

—Marga Sacher. MYOS-5. Pkt. 20c  
Blue, excellent pot plant for forcing.

—Star of Love. MYOS-6. Pkt. 25c  
Very floriferous, sky-blue, exquisite pot plant.

—dissitiflora. MYOS-7. Pkt. 15c  
Blue.

—scorpioides. MYOS-8. Pkt. 15c  
True For-get-me-not, large flowering blue, formally M. pulchris.

—Mixed Myosotis. MYOS-9X. Pkt. 10c  
All kinds mixed.

**MUSSAENDA**

—glabra. MUS-1. Pkt. 40c

**NASTURTIUM**

Tropaeolum (troh-PEE-oh-lum). Tender annuals not standing any frost, plant seeds in the open ground late in May or they can be started indoors in pots or boxes; they do best in rather poor soil in a north exposure. In some localities the leaves and seed pods are pickled and sold as Indian Cress.

SEMI-DOUBLE GLEAM. 18-in. tall, this is the most popular type.

—Orange Gleam. NAST-1. Pkt. 10c; oz. 30c; 1/4 lb. 80c  
Deep glowing golden orange.

—Rose Glow. NAST-2. Pkt. 10c; oz. 30c; 1/4 lb. 80c  
Soft grenadine rose.

—Vermilion Glow. NAST-3. Pkt. 10c; oz. 30c; 1/4 lb. 80c  
Vivid scarlet, dark foliage.

—Golden Gleam. NAST-4. Pkt. 10c; oz. 30c; 1/4 lb. 80c  
—Scarlet Gleam. NAST-5. Pkt. 10c; oz. 30c; 1/4 lb. 80c

—Mixed Gleam Hybrids. NAST-6X. Pkt. 10c; oz. 30c; 1/4 lb. 80c

**GLOBE TYPE, GIANT DOUBLE**

—Scarlet Emperor. NAST-7. Pkt. 10c; oz. 40c; 1/4 lb. 90c  
Dark foliage.

—Golden Rose Emperor. NAST-8. Pkt. 10c; oz. 40c; 1/4 lb. 90c  
Dark foliage.

—Golden Globe. NAST-9. Pkt. 10c; oz. 40c; 1/4 lb. 90c  
Golden yellow flowers.

—Mahogany Gem. NAST-12. Pkt. 10c; oz. 40c; 1/4 lb. 90c  
Deep mahogany.

—Mixed Double. NAST-10X. Pkt. 10c; oz. 30; 1/4 lb. 90c

—Tall Single Mixed. NAST-11. Pkt. 10c; oz. 30c; 1/4 lb. 90c  
18 inches tall or 4 ft. trailer. Special mixture.

—Single Dark Leaved Sorts. NAST-13. Pkt. 10c; oz. 40c; 1/4 lb. 90c  
Dwarf plants with all dark leaves that are especially pretty in beds or boxes.

—peregrinum. NAST-14. Pkt. 10c; oz. 35c  
Canary Bird Flower. Quick growing annual climber having curiously cut yellow flowers with curved green spurs, the whole flower vaguely resembling canary birds in flight; good in any soil, 15 ft.

**NEILLIA (NEEL-i-ah)**

Asiatic deciduous shrubs very close to Spirea and belonging to Rose Family. Very graceful, of spreading habit with bright green leaves and small pink or white flowers in terminal clusters, fairly hardy and easily grown from seed.

—thyrsiflora. NEIL-1. Pkt. 25c  
Grows to 6 ft., hardy in the South, flowers white. In the North it is usually killed to the ground but renews itself.

**NEMESIA (ne-MEE-si-ah)**

Small half hardy annuals having bright yellow, orange and red Snapdragon-like flowers; start seeds indoors in March, set out late in May, spacing plants closely so as to support each other; fine for window boxes.

**FOLLOWING ALL BELONG TO**

N. STRUMOSA:

—Aurora. NEME-1. Pkt. 15c  
Compact, large flowering turkey-red with milk-white.

—Fire King. NEME-2. Pkt. 15c  
Dwarf compact variety, blood red flowers.

—Triumph, Mixed. NEME-3. Pkt. 15c  
—sultoni, Mixed. NEME-4. Pkt. 15c  
Large flowers, more varied color range.

—Orange King. NEME-5. Pkt. 15c  
Bright orange yellow, compact, large flowered.

—Twilight. NEME-6. Pkt. 15c  
Blue and white, compact, large flowered.

—Best Mixed. NEME-7X. Pkt. 15c; 1/4 oz. 25c  
—suberbissima, gr. fl. NEME-8. Pkt. 15c  
Very choice mixture of dwarf plants.

NEMOPHILA (ne-MOF-i-lah)  
Delicate annual plants, mostly natives of California. If seeds are sown early in the spring in a semi-shaded spot in the garden the small bright flowers will bloom continuously all summer.

—insignis, Blue. NEMO-1. Pkt. 10c; 1/2 oz. 35c  
Baby Blue Eyes. Lovely sky-blue flowers, sun or partial shade, sow in position, early to flower; beautiful for edgings or rockery, 6".

—Mixed. NEMO-2. Pkt. 10c; 1/4 oz. 45c  
All sorts mixed.

NEPETA (NEP-e-tah)  
Annuals and perennials with flowers in whorls of blue or white borne in spikes or clusters; many are used in medicinal products as well as useful in the flower garden.

—mussini. NEPE-1. Pkt. 10c  
A small blue flower with dark spots, perennial, sun or partial shade, ideal for the rock garden; the plant is covered with whitish down, 8", April-June, HP. (Ground Ivy).

—rhapenorhiza. NEPE-2. Pkt. 30c

NICANDRA (ni-KAN-drah)  
—physalodes. NICA-1. Pkt. 10c  
An old fashioned annual with blue flowers and white centers, similar to Physalis but with more showy flowers; easily grown from seed. Called Shoo-fly or Fly-poison Plant, because of its ability to kill house flies if some of the crushed leaves and shoots are mixed with milk so that the flies can get to it, 3 ft.

NICOTIANA  
(ni-koh-shy-AY-nah)  
All are sensitive to frost, preferring light soil and warm sheltered situation. Start seeds indoors in March or in cold frame; in Kentucky the tobacco is sown in outdoor beds during March and protected with cotton covering, the seed is very fine and care should be used in planting it; set plants in the garden after the weather has become warm, the later parts of May. We offer, besides the flowering types of Nicotiana, most of the accredited varieties of field tobacco, especially as grown in Kentucky where the White Burley type is grown.

—affinis, White. NICO-1. Pkt. 10c  
Sweet Scented White Tobacco. Pure white tuberoscent flowers, bushy branching plants; plant in garden where the sweet scent will be enjoyed in the evening, 3 ft.

—Red Hybrid. NICO-2. Pkt. 10c  
A French hybrid, flowers in bright red shades.

—Miniature, White. NICO-3. Pkt. 25c  
Very sweet scented, 1 1/2 ft. tall, fine in beds.

—sanderiae, Crimson King. NICO-4. Pkt. 10c  
Rich deep carmine, 2 1/2 ft.

—Scharlachkonigin. NICO-5. Pkt. 10c  
A very large flowered dark scarlet, 3 ft.

—sanderiae, Hybrids. NICO-6. Pkt. 10c  
—sylvestris. NICO-7. Pkt. 10c  
Tall graceful plants topped with showery-like clusters of starry white flowers with long slender tubes which open in the day time, not fragrant.

NIEREMBERGIA  
(nee-rem-BER-ja-ah)  
Low growing half hardy perennials, usually treated as annuals flowering first year from indoor started seeds; require a warm, protected position especially at the start. They are fine for rock garden or borders and few plants are better for boxes or vases.

—frutescens. NIER-1. Pkt. 15c  
Shrubby and branching with light lilac flowers and yellow throats, 2-3 ft.

—gracilis. NIER-2. Pkt. 15c  
Creeping type, light lilac and brown center.

—hippimancica. NIER-3. Pkt. 25c  
Cup-like flowers 1 1/2" across, lavender-blue, best in sandy soil and full sun.

—Purple Robe. NIER-4. Pkt. 25c  
during the growing season of fine mar. Rich deep violet-purple, very desirable shade that will not fade, 8".

—damascena, Miss Jekyll. NIGE-1. Pkt. 10c; 1/4 oz. 30c  
Double Cornflower blue, one of the prettiest old fashioned annuals, good for cutting or border, 1 1/2 ft. Called "Love-in-a-Mist."

—hispanica. NIGE-2. Pkt. 10c; 1/4 oz. 40c  
Hardy annual, dark blue, 18 inches, attractive in mixed bouquets.

NOLANA (noh-LY-nah)  
Trailing herbaceous perennials grown as annuals, with flowers resembling Morning Glories but having more substance; will thrive in hot dry sunny positions; useful in baskets or for border or rockery, sow seeds where they are to grow though they can be started indoors; combines well with Portulaca, requiring

the same treatment.

—atropifolia gr. fl. alba. NOLA-1. Pkt. 10c  
Trailing hardy annual with white flowers, 6".

NOMOCHARIS  
Extremely beautiful Lily relatives, suggesting miniature L. speciosum. They are almost unknown in this country and not much can be said about their culture. Seeds germinate irregularly, should be sown in a pot so that the soil can be transplanted without disturbing the seedlings. Give Lily culture (B), grow in shade.

—pardanthina. NOMO-1. Pkt. 75c  
Lovely lily-like flowers, grow in shade; flowers pale rose-pink, 3 in. across, the inner petals spotted with violet, HB, 2 ft.

NORDOSTACHYS  
—jatamasi. NORD-1. Pkt. 25c

OENOTHERA (ee-noh-THEE-rah)  
A large genus of annuals, biennials and perennials, divided into two groups, viz., Evening-primroses, which open late in the day and close towards morning, and the Sundrops, which open during the sunlight hours. The former open with a quick motion which can be seen and heard, they are among the best evening garden flowers; flowers soft Poppy-like blooms on end of upright spikes. They require dry soil and full sunlight, very easily grown.

—drummondii. OENO-1. Pkt. 15c  
Light yellow, biennial grown as an annual.

—lamarkiana. OENO-2. Pkt. 15c  
Evening Scented Primrose. Yellow flowers 2" across, especially pretty in background plantings, 3 ft.

—odorata. OENO-3. Pkt. 15c  
Yellow, sweet scented, biennial grown as an annual.

—Mixed. OENO-4X. Pkt. 10c

OPHIPOGON (o-fe-o-PO-gon)

Turf-forming plants of the Lily Family, with racemes of small whitish flowers and grass-like foliage, often striped or spotted with white or yellow; useful for turf and border edgings, requiring no clipping; some rather tender in the N.

—intermedium. OPHI-1. Pkt. 50c

—clarkii. OPHI-2. Pkt. 50c

ORNITHOGALUM

(aur-ni-THOG-ah-lum)  
Bulbous plants of the Lily Family with lily-like flowers in clusters at top of leafless stems. They are very pretty.

—caudatum. ORNI-2. Pkt. 25c  
Sea Onion. Popular house plant, has large bulbs held above the soil.

—sandersiae. ORNI-1. Pkt. 25c  
A splendid addition to the group of easily grown bulbs for the summer garden; handle like Gladiolus, seeds germinate quickly and strongly, making excellent cut flowers which rise from pretty rosettes of glossy, channeled leaves and on stems 3-6 ft. long at the end of which is a great flower cluster that opens successive buds over a long period; flowers large wax-like petals of creamy white about center boss of olive black, very decorative in garden.

OSBECKIA (os-BEK-i-ah)  
Little known plants of the order of Melastomaceae, ranging from herbs to evergreen shrubs; the flowers, with five obovate petals, are showy and borne in heads or panicles. While quite tender, they may be grown in the house or greenhouse during the winter and plunged outdoors in summer, best in light shade.

—White. OSBE-1. Pkt. 35c

OTHAKE

—sphacelata. OTHA-1. Pkt. 15c  
Rosy Wings. This is definitely one of the better annuals of recent introduction and especially good in dry seasons; easy to grow, long blooming period, flowers 1" across and carried in clusters of many flowers, each flower having a dense double center enriched by wing-like 3-lobed petals in a very pleasing silver

OXALIS (OK-sah-lis)  
Small delicate plants, some useful in the rock garden, for bedding, hanging baskets and in the greenhouse. Usually best to start them in the spring, requiring an acid soil of a porous mixture of leaf mold, loam and sand; liquid manure if applied near maturity will encourage flower production.

—corniculata purpurea. OXAL-1. Pkt. 20c  
The purple leaved bedding Oxalis with yellow flowers, a perennial grown as an annual.

OXYPETALUM

—paniculata tropica. OXSY-1. Pkt. 35c

OXYPETALUM

—caeruleum. OXY-1. Pkt. 20c  
An easily grown hardy annual that, when sown in April, blooms by the end of June and continues till end of October. Also make a pretty pot plant; flowers 1" across, star-shaped in many flowered sprays, color an unusual blue of silvery veiled pastel quality as if printed on each petal.

PAEONIA

Peony. Only recently has interest developed in the various wild species many of which flower weeks before the border varieties, and make possible two months of single flowered. The species are all single flowered, with varied and highly ornamental leaves, and of colors unknown in the border varieties, including pure yellow and bright scarlet. They are also very valuable for hybridizing and many new forms have been developed recently by crossing the species.

Peony seeds require a full year, in most cases, before the plant appears above ground. During the first season root growth only is made, but with the first warm days of the following spring, fair sized true leaves appear. Growth for the first season or two is rather slow, but later the plants develop rapidly. Three or more years are required to reach flowering size. Sowings may be made in an open ground bed in spring and no attention is required except to keep the bed free from weeds.

—beresowskii. PEON-4. Pkt. 50c  
A very rare herbaceous species with finely cut foliage and rather flat flowers 3 in. across, white or pink, 2 ft., HP.

—brownii. PEON-3. Pkt. 30c  
The only peony native to N. Am., with rather small flowers or red-brown and yellow, effective and unusual. It is small enough for the rock garden and presents interesting possibilities to hybridizers, 1 ft., HP.

—chamaeleon. PEON-1. Pkt. 80c  
The earliest flowering of all Peonies and one of the quickest and most vigorous from seed. It blooms a full month before the border varieties, with crinkled flowers 4 inches across, of pink or rose and rarely soft yellow. The leaves are very large and handsome, tinted brown in early stages of growth. The seed-pods are also highly ornamental, lined with rich red, while the seeds themselves are cobalt blue; apparently a true species, of unknown origin.

—emodi. PEON-9. Pkt. 50c  
—lutea, Sheriff's Var. PEON-8. Pkt. 60c  
Seeds are 20c each. A magnificent form, growing 5-6 ft., rich golden yellow flowers; still very rare in cultivation and will be invaluable in hybridizing.

—mascula. PEON-5. Pkt. 75c  
A rare species with handsome scarlet flowers, 3 ft., HP.

—mikosiewitschii. PEON-6. Pkt. 50c  
The only truly yellow herbaceous peony with pale yellow flowers, 4 in. across, single. Hardy, and does well in acid, well drained soils, full sun, 2 ft., HP.

—species mixed. PEON-2. Pkt. 75c  
From a large collection of European and Asiatic species. The color range is from bluish and pale yellow to deep red, with many intermediate shades. The mixture is probably strongest in P. woodwardii which makes a dense mound of fern-like leaves, over which are borne in profusion rather flat flowers, 3 inches or more across, of varying shades of pink. Included also are P. lobata with tulip-like flowers of intense scarlet, the most brilliant color known in Peonies; multi-colored P. chamaeleon, including yellow flowered and numerous others. These will flower for weeks before the herbaceous border sorts begin to bloom and offer a wealth of color for border and cutting, HP, 2-3 ft.

—woodwardii. PEON-7. Pkt. 50c  
One of the loveliest Peony species, having ferny foliage and a profusion of rather flat Dahlia-like flowers in pink shades, early, 2 ft., HP.

PANCRATUM

(pan-KRAY-shi-um)  
Peruvian Daffodil. Interesting white or green flowered bulbous plants of Amar-ylis Family. They are not hardy in the N.



range of dark rich colors any blend of Swiss Giants, we have seen. Plants are uniformly compact and most of the blooms are waved, giving them the appearance of being frilled.

—Super Swiss Giants. PANS-12. Pkt. 25c; 1/4 oz. \$3.00

An improved California strain with enormous flowers of fine texture and form coming in a remarkably fine color range and especially well marked, many being beautifully ruffled and curled; long stems and sturdy plants are characteristic of this particular strain.

—Dwarf Swiss Giants. PANS-13. Pkt. 25c; 1/4 oz. \$3.00

A very dwarf compact new strain, extra early flowering in complete color range running to brighter colors.

#### VARIOUS STRAINS OF PANSIES:

—America Blend. PANS-14. Pkt. 25c; 1/4 oz. \$3.00

An extremely bright blend, early flowering and dwarf with a good color range; plants sturdy, flowers large.

—Coronation Gold. PANS-15. Pkt. 25c; 1/4 oz. \$3.00

Giant golden yellow blooms, this is a specialty with one of our European growers and is considered very high class, with out blotches or markings.

—Engleman's Giants. PANS-16. Pkt. 35c; 1/4 oz. \$4.00

An early giant flowered strain on compact plants; flowers average 4" across and coming in a beautiful color range containing both light and dark shades with a good percentage of bronze and reds; never solid colors as each flower has a lighter tone around the edges of each petal.

—Maple Leaf Giants. PANS-17. Pkt. 25c; 1/4 oz. \$3.25

A fine large flowered strain of good shape and substance, plants compact yet husky growers having a luxuriant dark green foliage and large leaves, color range both light and dark with rich dark velvety tones.

—Masterpiece. PANS-18. Pkt. 25c; 1/4 oz. \$2.00

Dainty ruffled and frilled flowers, colors rich in red and brown shades, compact plants excellent for borders.

—Orchid-flowered. PANS-19. Pkt. 25c; 1/4 oz. \$1.50

Medium sized flowers, beautifully waved and curled and in a wonderful color range, an European grown strain.

—Scottish Exhibition. PANS-20. Pkt. 35c; 1/4 oz. \$3.00

Symmetrical strain of plants bearing 4" flowers of perfect form and substance; in a multitude of new and varied color combinations.

—Schreiber's Black. PANS-27. Pkt. 50c

The best black flowered Pansy from this famous grower.

—Schreiber's Red. PANS-25. Pkt. 50c

A beautiful red color in this famous strain of German Pansies.

—Schreiber's White. PANS-26. Pkt. 50c

The height of perfection in a pure white.

—Schreiber's Mixed. PANS-28. Pkt. 50c

A blend of equal amounts of the above three varieties.

—Florist or Market Strain. PANS-21. Pkt. 25c; oz. \$4.75

An European grown strain of the highest quality and especially offered to plant growers. Extra choice.

—Trimardeau. PANS-22. Pkt. 20c; 1/4 oz. \$1.25

Brilliant mixture, extra choice and especially recommended where color effect is most prized in beds, border or edging. Plants are compact and especially free blooming, neat habit, very hardy, excellent blend in brilliant colors with some blotches, showy in mass planting.

—Himalia. PANS-23. Pkt. 25c

Mixed, this type is the winter-flowering Pansy, in type like the Trimardeau but very early flowering

TUFTED PANSIES: See Viola Cornuta.

#### PARIS

Related to Trillium, but with smaller flowers and needing the same conditions of rather open woodland. Its flowers are normally green and the plant is more curious than showy.

—polyphylla. PARIS-1. Pkt. 50c

A very striking plant 20-50 inches high with dark green leaves up to 6 inches long; the flowers are very large, the outer segments narrow and dark olive green, 4-5 inches long, the inner segments slightly shorter and yellowish green followed by a very large yellow or rust-colored berry; hardiness uncertain in the North.

#### PARKINSONIA

(pah-kin-SOH-ni-ah)

Tropical or sub-tropical trees and shrubs of Pea Family.

—aculeata. PARK-1. Pkt. 25c

Jerusalem-thorn or Raticum. Small thorny evergreen tree with feathery pendulous branches and loose clusters of fragrant yellow flowers; a fine hedge plant in far South standing dry conditions; easy from seed. Seed from Texas.

#### PARNASSIA (par-NAS-i-ah)

Belonging to the Saxifrage Family, these plants have smooth, mostly basal leaves and five-petaled flowers of white; like wet places and are much beloved by wild-garden enthusiasts.

—nubicola. PARN-1. Pkt. 30c

One of the best, with inch-wide white flowers and rather broad leaves, heart-shaped at the base; about 1 ft. high.

—palustris. PARN-2. Pkt. 30c

Seed collected in Alaska and found in wet places and swamps.

#### PEDICULARIS

(pe-dik-eh-LAY-ris)

Wood-betony, Lousewort. Annual and perennial plants of Figwort Family. Flowers 2-lipped, spiked clusters in whitish or reddish colors. They are fine wild garden flowers.

—densiflora. PEDI-2. Pkt. 25c

One of the most brilliant, with foot-high spikes of scarlet flowers. Perhaps somewhat parasitic and seed should be sown in open woodland in well drained locations, 1 ft., HP. Very choice and rare.

—siphonantha. PEDI-3. Pkt. 25c

Beautiful leaves and pink flowers for rockeries.

—nepalensis. PEDI-2. Pkt. 50c

—greenlandica. PEDI-1. Pkt. 25c

Flowers are elephant heads, trunk, ears and all. Grows in wet places, 12-18 in. tall, July.

## PENSTEMONS

A genus of perennial plants, both herbaceous and shrubby of the Figwort Family, all native of N. American and called Beardstongue.

Penstemons bloom in spring, some early and some late. They are mostly in the blue and purple range, with a few reds, but no good yellow or orange. They come in all heights and types of growth, suitable for almost any location. They are very floriferous and are lovely when the appropriate species are selected and grown happily; are likely to be disappointing when not happy or not suited to the location. They require no special type of soil, but certain fussy species will be short-lived unless the soil is very porous. Some kinds will do well only in rock gardens, others are more appropriate to the perennial border.

Penstemons bloom so heavily that they often exhaust themselves and die. They may usually be saved if the flower stalks are cut off after blooming water well, and give a little plant food. Bone meal applied twice a year will help, and perhaps a very little complete fertilizer just after blooming. The idea is to induce new growth from the crown to replace the old flowering stalks.

In spite of the best of care, it is just the nature of Penstemons for a certain percentage of each planting to die each year for no apparent reason. The easiest way to offset this inconvenience is to have more plants than you need and thus not have to worry if some of them die. It is best to raise them from seed, which is not a difficult operation, and to set out twice as many seedlings as the space will hold. Natural losses will thin them out. The seeds germinate well if planted out-

doors in late fall; spring planting is apt to be less certain, often nothing more is necessary than to scatter seed around the parent plants each fall and let the self-sown seedlings renew the old plants. Penstemons can also be increased by cutting taken at almost any time during the growing season.

#### AMERICAN PENSTEMON SOCIETY

The American Penstemon Society is engaged in research right now to discover which are the best species for different locations and what are the best methods of growing them. There are about 235 species of penstemons, all native to our own country, many of them as lovely as the best flowers from foreign lands. Very little is known generally about them. Experimenting with them is an adventure for gardeners with the pioneering instinct who wish to try something new and unknown. Information about membership can be secured by addressing a postcard to the secretary, Ralph W. Bennett, 5607 North 22nd street, Arlington, Virginia. The information brought forth by the Society is published in its bulletins. Annual dues are \$1.00, Amel Priest, Peru, Iowa, treasurer.

NOTE: We believe we are headquarters for Penstemon Seed. All offerings are carefully certified. Those marked with an (\*) after the symbol, viz. PENS-1\* represents seeds secured from sources checked by the American Penstemon Society and can be relied upon to be true to their classification. We will be pleased to have anyone growing especially fine hybrids to contact us. There is a large and interesting field here for hybridization.

flowers, 3/4" long. A rarity.

—digitalis. PENS-11\*. Pkt. 25c

—dolius. PENS-67\*. Pkt. 75c

A rare low growing species for the sunny rock garden; rosettes of narrow dusty green leaves and short spikes of inch-long blue-purple tubes; will stand much drought, HP, 6 inches.

—eatonii, ssp. exsertus. PENS-12\*. Pkt. 35c

Extremely showy species, large leaved and erect growth with the large stems bearing long open spikes covered with red flowers. This sub-species is taller than type, to 4 ft. with anthers exserted from corolla.

—eatonii, ssp. lanceifolius. PENS-13\*. Pkt. 40c

A Nevada form having narrow stem leaves.

—eatonii, ssp. undosus. PENS-14\*. Pkt. 30c

A form with downy stems and big basal leaves, and the usual pendant tubes of sealing-wax red, HP, 2-3 ft.

—eriantherus, ssp. saliens. PENS-15\*. Pkt. 25c

Flat rosettes composed of a great many narrow dull green leaves and short stems, bearing very large lavender flowers, somewhat variable in shade; a fine rock plant, quite easy in the East if grown in well-drained sandy soil in full sun, HP, 1 ft.

—fendleri. PENS-72\*. Pkt. 75c

The flowers are blue, flushed pink outside, rather narrow with widely spreading lobes; the leaves are gray-green, broad, somewhat heart-shaped. For rather dry sunny places in the rock garden or steep banks; it may be slightly tender in the N. as it comes from Texas and N. Mex., HHP, 1 ft.

—flavescens. PENS-16\*. Pkt. 40c

A neat looking alpine appearing medium tall species with small green leaves and small yellowish white to creamy yellow flowers in abundant clusters; a soft color, going well with the blue types, easy to grow.

—floridus. PENS-17\*. Pkt. 25c

A tall plant with conspicuous grayish sharply toothed glaucous leaves and long showy flower spikes on stout stems. Flowers are large, inflated, rose pink, to 4 ft. tall.

—fruticosus. PENS-18\*. Pkt. 30c

Woody shrub. Flowers blue, 2-ft. tall, June.

—garrettiae. PENS-19\*. Pkt. 50c

Rather low with several erect stems 8-16" high with a few tiny green leaves and quite large deep blue flowers on narrow spikes, very desirable for small rock garden.

—glaber. PENS-21\*. Pkt. 35c

Procumbent habit, fine purple blue, early and hardy, 1-ft., best in coarse soil. There is a sky-blue strain which we may be able to offer next year.

—gloxinioides, Sensation. PENS-62. Pkt. 30c

Very popular and showy; stout glaucous leaves and stems to 6 ft., carrying numerous large lavender blue flowers, fine border plant, very hardy.

—grandiflorus. PENS-22\*. Pkt. 35c

Very popular and showy; stout glaucous leaves and stems to 6 ft., carrying numerous large lavender blue flowers, fine border plant, very hardy.

—grandiflorus, ssp. albus. PENS-23\*. Pkt. 30c

Comes about 50% true white flowers, but the white flower is all white, no lavender, a sport from the type.

—Lavender Form. PENS-66\*. Pkt. 50c

—heterophyllus. PENS-77\*. Pkt. 75c

A showy and very variable species from California, not reliably hardy in the Midwest and East but will survive with some protection. The plants are more or less shrubby and vary from 1-5 ft. high with narrow leaves of various colors. The moderate-sized flowers, in loose sprays, are produced over a long season and vary in color from rose-violet to intense pure blue. Best grown in full sun with very sharp drainage, in a sheltered position in the border, HP, 1-5 ft.

—Selected Blues. PENS-85\*. Pkt. 30c

Selected blue strains, very good.

—Pale Azure-blue Selections. PENS-86\*. Pkt. 30c

Choice selected plants of this variety.

—hirsutus, Improved. PENS-24\*. Pkt. 35c

An easy eastern species, with rather large leaves and a profusion of moderate sized flowers. The color is usually rather poor, but in this selection only good colors will appear, pink to purple, HP, 2 ft.

—jamesii. PENS-25\*. Pkt. 50c

An alpine-appearing plant of very neat habit, the large clump of grayish leaves being attractive and the flower large, quite densely packed and numerous enough. Flowers soft color, blue-lavender.

—laevigatus. PENS-27\*. Pkt. 50c

A very nice background plant for the border, pale lavender flowers.

—leiohyllus. PENS-30\*. Pkt. 60c

A rare species of the glaberr and confined to one mountain range, dark green foliage, to 3 ft. flowers deep pure blue, profuse bloomer and should be easy to grow.

—lentus. PENS-28\*. Pkt. 80c

An attractive little plant of somewhat alpine appearance but with no conspicuous basal rosette; its slender stems leafy and floriferous with spikes of blue flowers, extremely rare in nature.

—linarioides, ssp. coloradoensis. PENS-82\*. Pkt. 50c

A tiny shrub with long narrow silvered leaves and small lavender flowers. Quite easy in the rock garden, in sun, and attractive at all seasons, HP, 6 inches.

—microphyllus. PENS-31\*. Pkt. 40c

A much branched shrub to 4 ft. high and across, with tiny green leaves, each branch ending in a 6" spike of bright yellow flowers about 3/4" long, may not be hardy in far N.

—miser. PENS-70\*. Pkt. 75c

Low growing, with tufts of dirty green leaves and short spikes of flowers very variable in size and either dusty pink or blue-purple in color. For dry sunny locations in the rock garden, HP, 6 inches.

—montanus. PENS-68\*. Pkt. 75c

One of the very few very truly alpine species, growing on stone slides at high altitudes. Forms woody mats from which rise short stems with light green deeply toothed leaves, and tipped with clusters of enormous clear-lavender trumpets. One of the most showy dwarf species, for rock garden in full sun, likes lime, HP, 8 inches.

—murrayanus. PENS-78\*. Pkt. 75c

A tall species with very large and wide-open scarlet flowers. Very showy for the border, preferring sandy soil; should have some protection in very cold climates, HHP, 3-4 ft.

—neomexicanus. PENS-71\*. Pkt. 75c

Quite long spikes of rather bell-shaped flowers, of varying shades of blue and narrow green leaves; from the mountains of southern New Mexico where it grows in sunny meadows. Tall enough for the front of the perennial border or fine for a sunny bank, HP, 2 ft.

—ovatus. PENS-73\*. Pkt. 35c

One of the easiest and most popular species for the border, satisfied with almost anything except deep shade. Long spikes of good-sized flowers of rather slaty blue, above handsome rosettes of large glossy dark green leaves. One of the best species for the beginner, HP, 2-3 ft.

—palmerii. PENS-33\*. Pkt. 50c

The large sharply toothed leaves are conspicuous from a distance; the flowers are among the largest in the genus and always plentiful; a very showy plant and much praised. Flowers are similar in shape to those of the Catalpa, an inch or more across, broad and flaring, whitish, flushed more or less with pink and some a rich deep pink.

—palmerii, White Form. PENS-34\*. Pkt. 40c

A pretty white form of the species with a pink flush at base and purple guide lines.

—palmerii, ssp. eglandulosus. PENS-35\*. Pkt. 40c

Plants much broader with many stems which are thinner than those of the type and with smaller capsules.

—pinifolius. PENS-81\*. Pkt. 75c

A newly introduced species that has long been coveted by ardent rock gardeners. From the woody base arise short stems set with very short and narrow light green leaves, above which are narrow trumpets, scarlet with yellow throat, and with long reflexed lower lip. From mountains near Mexican border, but perfectly hardy and easy in the East. Will tolerate light shade and likes some sand in the soil, a great treasure in a sunny rock garden, HP, 6-9 inches.

—platyphyllus. PENS-36\*. Pkt. 75c

Sub-shrubby, a very attractive, alpine appearing showy little plant with a mat of little leaves at base and numerous erect stems about 12" high, each with a well packed prominent spike of blue flowers; desirable in every way for the small or medium rock garden.

—procerus. PENS-37\*. Pkt. 25c

Native Montana species, blue flowers, 10-18 inches tall, June-July.

—pseudospectabilis, ssp. connatifolius. PENS-38\*. Pkt. 50c

Thin bright green leaves, finely toothed, corolla pink to rose and rather narrow, quite showy.

—rattani inor. PENS-91. Pkt. 50c

—richardsoni. PENS-87\*. Pkt. 30c

One of the easier species, with deeply lobed leaves and short but rather broad flowers ranging in color from pink and bluish to rose-lilac. Hardy and a good one for the beginner, 1/2-2 1/2 ft., HP.

—rubicundus. PENS-40\*. Pkt. 60c

A very attractive species with unusual lovely color of rose with a touch of blue, showy for the wild garden or for the border, stands some shade. Not a common species, 4 ft.

—secundiflorus. PENS-42\*. Pkt. 30c

Very showy graceful plant of medium height making a clump of small bluish green leaves, several wavy stems, leafy on lower half and numerous large lavender flowers; desirable for either rock garden or border.

—secundiflorus, ssp. lavandulus. PENS-43\*. Pkt. 25c

Has glaucous blue leaves and blue flowers, otherwise like the type.

—sepalius. PENS-44\*. Pkt. 50c

Very narrow gray leaves on thin stems, much branched sub-shrub to 3 ft. with quite large and inflated violet flowers; very showy.

—speciosus. PENS-45\*. Pkt. 50c

Very showy member of the Glaberr with unusually large blue flowers on stems 1-2 ft. not too tall for the small rock garden or too low for the front of the border, extremely desirable in every way.

—strictus. PENS-46\*. Pkt. 25c

Very showy species with narrow leaves, stems bearing densely packed spikes of deep blue flowers, slender but strong stems, delicate looking but heavily flowered, 1 1/2-2 ft., for border or large rock garden.

—subglaber. PENS-47\*. Pkt. 50c

Quite similar to P. glaber, very showy, very floriferous, large deep blue flowers packed on quite long spikes; very lovely and ornamental species.

—triflorus, ssp. integrifolius. PENS-48\*. Pkt. 30c

Tall herbaceous species with c. 2 to several stout stems, with large spear-shaped leaves dark green, very large bright rose-purple, broadly bell-shaped flowers in dense spike-like panicles. This should grow readily in cultivation and will be a favorite in gardens. This is a

rather rare species as yet. Highly recommended.

—triphyllus, spp., diphyllus. PENS-49\*. Pkt. 40c

Rather low growing, with stems semi-prostrate; rather small toothed leaves. Flowers are rather short, but quite broad and rich blue-purple; not one of the showiest species but very attractive in the rock garden, HP, to 1 ft.

—unilateralis. PENS-50\*. Pkt. 25c

Tall, lavender flowers more or less distinct veining in throat; not difficult to grow and very pretty in the garden. A favorite.

—utahensis. PENS-69\*. Pkt. 75c

1-inch-long rather narrow tubes of cherry-red above loose rosettes of rather narrow blue-gray leaves; out of flower, the plant looks much like P. angustifolius. For stony sunny slopes; may need slight protection in cold winters. This is the true species, the name often appears in catalogs, misapplied to dull and undesirable species, HP, 1-2 ft.

—watsoni. PENS-74\*. Pkt. 75c

Makes a fair-sized tuft of many thin and graceful stems, with a profusion of small flowers of light to deep blue. An easy species for the rock garden in sun or light shade and will thrive under poplar trees, HP, 1 ft.

—whippleanus. PENS-51\*. Pkt. 50c

The flowers in our particular offering are hooded and of a deep black-purple or sometimes greenish-yellow; the leaves small, dark green and in prominent rosettes; rosettes of small dark green leaves; medium height and very floriferous. The species is quite variable in color and some may be disappointing.

—wilcoxii. PENS-52\*. Pkt. 30c

Open panicles to 2 ft., clear blue, medium sized flowers. Likes drainage as do most Penstemons and given this they will grow on fairly moist slope in sun or part shade.

Fairly large growing but desirable, best in shady, wild garden, flowers blue, 1-3 ft., May-June.

—Saier's Blend of Species. PENS-53\*. Pkt. 35c

This is a mixture of every species and sub-species we have in stock and including many unlisted ones, that we do not have enough of to offer separately. This is a rare and valuable collection of Penstemons. They should, of course, be grown in a nursery row until you can tell just what they are.

—Small Flowered Varieties Mixed. PENS-54. Pkt. 35c

#### PAROCHETUS (pa-roh-KEE-tus)

—communis. PARO-1. Pkt. 35c

Shamrock-pea. Also known as Blue-oxalis. Low growing creeper of the Pea Family with cobalt-blue flowers with pink wings; they are a very useful and popular pot plant for hanging baskets and flower the whole year. They do best in mixture of sand and humus in a semi-shaded place; in the North they are not real hardy; they also are fine in the rock garden.



**PHLOGACANTHUS****(flo-ga-CAN-trus)**

Somewhat shrubby plants with spikes of attractive flowers, related to Acanthus. They are best grown in the greenhouse, requiring a rather warm, damp atmosphere and soil rich in humus. The flowers are tubular, two-lipped, rather long and broad.

—**hyssiflorus.** PHLK-1. Pkt. 30c  
A moderate-sized shrub, with narrow leaves, bearing red and yellow spotted flowers.

**PETUNIA**

There is hardly any other flower that will give so much bloom with as little care as will the Petunias; in the hot summers, their bloom is continuous. Their use is confined to porch boxes and baskets and for bedding. They do not do well in shade.

The chief pitfall the amateur runs up against in growing Petunias is in the seed sowing; almost invariably they bury the tiny seeds too deeply so that the sproutlings cannot possibly fight their way to the surface. First the soil should be a good loamy texture with fine leaf mold mixed in for the top. Flower pots, the best type or fern pot make an ideal seed sowing place; some drainage material in the bottom and fill to the top with the above soil then press down and sow the seeds carefully on top of the soil, using a little soil with the seeds so as to get a better distribution of the seeds; then give a fine sprinkling of sand over the seed, not over 1/16 inch at most, press the seed down firmly but carefully so that the seed will come in contact with the soil particles. This work should really be done a day before planting the seed, when the soil can be well watered and the pot soaked with water, letting this stand over night, before sowing the seed. Then after the seed is planted, place a pane of glass over the pot to prevent the loss of moisture, but watch carefully for too much condensation of water on the glass, which should be removed daily and the seed bed given ventilation. The pot should be in a place with about a 60 degree night temperature and exposed to the light; germination shows in about 10 days, when the seedlings should have light and ventilation; if the soil was properly watered at the beginning it usually is not necessary to rewater during the germination period. In too dry a place it will be best to protect the flower pot from too much drying out. When seedlings show 3-4 leaves, transplant to flat containing good soil with plenty of humus worked into it and for still better plants, it is well to transplant them again after they get a good root system started, placing them into 2-3 inch pots. Petunias require plenty of sunshine. Set outdoors when it is warm and no danger of frost.

—**Double Giants of California.** PET-1. Pkt. 50c  
An improved Shepherd Strain with immense blooms typical of this strain, magnificent color range and high double percentage.

—**Ruffled Monsters, Giants of California.** PET-2. Pkt. 50c  
Light and dark shades make up this high class blend, deeply ruffled and artistically veined, flowers 5"-7" across and almost look as if double.

—**Dwarf Giants of California, Rosie.** PET-3. Pkt. 35c  
Rich rose, shading deeper in throat, very compact and large flowered, a perfect florist variety for pots and boxes.

—**Dwarf Giants of California, Deep Rose.** PET-4. Pkt. 35c  
A very pretty deep rose shade with mammoth flowers, ruffled and beautifully penciled.

—**Dwarf Giants of Calif., Ramona Strain.** PET-5. Pkt. 35c  
Habit is dwarf and compact; colors are hand blended; flowers ruffled and fringed and suitable for the most critical.

—**Giants of Calif., Salmon Rose Shades.** PET-6. Pkt. 50c  
This is a special mixture for the Florist trade and contains only the choicest salmon-rose colored plants; its blooms are exceptionally large, averaging 5-6 inches, with shallow open throats; flowers freely produced on sturdy plants and all have beautiful veined markings on their open throats.

—**Giants of California, Mixed.** PET-9. Pkt. 35c; 1/32 oz. \$3.50  
Well balanced blend of light and dark shades, fringed and ruffled, with attractive deep throats, many beautiful veined; the first picking from the choicest plants. For bedding or boxes.

—**gr. fl. Fluffy Ruffles.** PET-8. Pkt. 35c; 1/32 oz. \$2.25  
A delightful blend, containing numerous shades of veined and bicolor pink and rose combinations not found in the separate color varieties; all flowers are finely fringed and so heavily ruffled that they appear double; by far the finest choice Petunia for the home garden and a prime favorite with the florist.

—**Giants of California, Florist Strain.** PET-7. Pkt. 50c; 1/32 oz. \$4.00  
Supreme Florist Strain in extremely large flowers, in shades of rose, pink, salmon, copper and other delightful soft pastel tints.

—**Giants of California, Bes. Mixed.** PET-10. Pkt. 35c; 1/32 oz. \$3.50  
A blend of the largest and choicest colors especially for the Florist trade; hand blended from the best varieties by one of our largest Petunia growers.

—**gr. fl. Single Mixed.** PET-11. Pkt. 25c; 1/32 oz. \$1.10  
The large flowering type with plain edges, 12" tall, and making the most attractive showing in beds, boxes or baskets. The blend is the very best.

—**HYBRID NANA COMPACTA VARIETIES:**  
These grow 12" tall, the plants are compact and upright and make the best plants for beds where a uniform shape is wanted with an abundance of flowers the whole summer and fall.

—**Blue Violet.** PET-12. Pkt. 20c; 1/2 oz. 50c  
A shade deeper than Periwinkle and several tones lighter than Viola, the most beautiful dark violet.

—**Celestial Rose, Reselected.** PET-13. Pkt. 25c; 1/2 oz. 70c  
Deep rose, very compact, in an improved habit and much larger flowers.

—**Glow.** PET-14. Pkt. 25c; 1/2 oz. 75c  
A beautiful bright carmine-red.

—**Rose of Heaven, Improved.** PET-15. Pkt. 20c; 1/2 oz. 70c  
Reselected live rose-pink with compact habit, greatly improved form.

—**Snow White.** PET-16. Pkt. 20c; 1/2 oz. 50c

Pure white, the best white in this classification.

—**Topaz Queen.** PET-17. Pkt. 30c; 1/2 oz. 70c

**GRANDIFLORA NANA COMPACTA:**

These are dwarf plants about 8" tall, with an especially large flower; they are especially fine for plants, boxes and baskets.

—**Velvet Ball.** PET-18. Pkt. 50c; 1/32 oz. \$2.00  
Round, compact ball-shaped 8" plants, freely producing 2 1/2" velvety blood red flowers, excellent new type.

—**King Henry.** PET-19. Pkt. 50c; 1/32 oz. \$2.00  
HYBRIDA TYPE: These grow 18" tall, rather spreading plants that can be used anywhere; the flowers are not so large but they are extra floriferous and are hard to equal for the ordinary flower bed.

—**De Luxe Bedding Blend.** PET-20. Pkt. 20c; 1/2 oz. 50c  
A beautiful blend of the most desirable varieties and in the very best color range.

—**Formula Blend.** PET-21. Pkt. 20c; 1/2 oz. 50c  
This blend contains every known color in the Hybrid group, in a wonderful blend which has taken years of experience to perfect. This is the outstanding blend of one of the better Petunia growers in the country.

—**MINIATURE TYPE:** 8" plants with good sized plain bright flowers, each plant compact and upright and making the most beautiful effect in edgings.

—**Bright Eyes.** PET-22. Pkt. 25c; 1/32 oz. 50c  
A soft pink color with white throat, giving the plants a "bright eyes" effect. Very pretty as an edging plant.

—**Best Mixed.** PET-23. Pkt. 25c; 1/32 oz. 50c  
A hand blend of 7 exquisite varieties. Very fine. These would make a grand display for a bare place in the rockery as well as an edging.

—**Little Giants.** PET-24. Pkt. 50c; 1/32 oz. \$1.40  
A new type Petunia, 8-12" tall, plants remain so neatly compact and erect all season it is sure to become most popular for bedding and pot plants. Medium sized, well ruffled and waved, deep throated flowers continue to keep the plants completely covered. The unusually attractive color range from deep crimson to white in almost every imaginable shade and combination of marking; it has a pleasing balance of light and dark shades.

—**here are 150,000 to 250,000 Petunia seed in an ounce of seed.**

—**PHLOMIS (FLOH-mis)**  
Perennial plants belonging to Mint Family, suitable for the wild garden or shrubby border. Easily grown from seeds.

—**Purple Mixed.** PHLO-1. Pkt. 15c  
Showy long-lived perennials of easiest culture, 4 ft., vivid purple flowers in whorl above whorl, good.

—**PHLOX**  
A genus with mostly perennials and consisting of a varied list of plants; all are easily grown. The perennial sorts do well in a rather heavy soil, but all thrive in any good garden soil. While the best known are the tall perennials, they come in other types, creeping species that are suited for rock work.

—**paniculata, New Hybrids, Mixed.** PHLO-1. Pkt. 15c  
Often listed as P. decussata. Common name Summer Phlox.

—**Contrains brilliant colors in large flowered plants, strictly first class selections; perennial and will afford an interesting collection of new colors and combinations.**

—**Drummondii, Gigantea, Mixed.** PHLO-2. Pkt. 20c  
Easily grown summer annuals preferring sunny situations, light rich loam; if faded blooms are removed will flower again in the fall; excellent for borders, beds and cutting. This is an extra large flowered strain, florets 1 1/4"-1 1/2" across, blooming freely in massive trusses. This strain has taken all the prizes, 1 ft.

—**Art Shades.** PHLO-3. Pkt. 20c  
Soft pastel colors and delicate shades in mammoth trusses of large flowers, 1 ft.

—**Cecily.** PHLO-4. Pkt. 20c  
This is the finest large flowered dwarf Phlox in existence, forming round compact bushes about 6-8 in. tall which are covered with its large flowers. These very beautifully, most being centered white or dark or striped; its regular and uniform growth in all colors, grand display of shades and the large size of the flowers, makes the Cecily Phlox far above all other dwarf sorts.

—**adsurgens.** PHLO-6. Pkt. 50c  
Prostrate, with shiny leaves and big flowers varying from white to deep pink. One of the most beautiful species and easy in the Northwest but regarded as very difficult in the East; needs woodland conditions of shade and humus, HP. Very rare species.

—**diffusa.** PHLO-7. Pkt. 50c  
A needle-leaved species forming dense mats a foot or more across, covered with fairly large blooms, usually lavender but occasionally white or pink. Needs very gravelly soil in full sun, with sharp drainage; under these conditions the western Phlox are fairly easy to grow in the East, in spite of their reputed difficulty; seeds germinate quickly, 6", HP.

—**speciosa.** PHLO-8. Pkt. 50c

—**PHORMIUM (FOR-me-um)**  
New Zealand Flax. Magnificent plants for sub-tropical effects, somewhat suggesting Yucca in habit. The basal rootstock produces a great number of very long and narrow sword-like leaves, which may be more than 8 ft. in length. The flowers, up to 2 in. long are produced in a panicle at the top of a tall stem and may be either red or yellow. Seeds germinate very readily, the seedling grow rapidly. Plenty of moisture is required to produce fine specimens. A pot plant in the N. although it is reported to have survived short periods of as low as 10 degrees F.

—**tenax.** PHOR-1. Pkt. 40c  
The larger of the two species with leaves as much as 9 1/2 ft. long and 2 inches wide, dark green with bright red margins and keel. The flower scape is from 5-15 ft. high with tubular flowers of dull red or pure yellow, HHP, 5-15 ft.

—**coquianum.** PHOR-2. Pkt. 40c  
A plant half the size of P. tenax, with pale green leaves and slightly smaller yellow flowers, HHP, 3-7 ft.

—**nuals.** Blue, white, rose, violet yellow flowers showy; foliage resembles fern

**PHOTINIA (foh-TIN-ah)**

Asiatic and deciduous evergreen shrubs and trees of Rose Family. The deciduous kinds are hardy in the North, the evergreens hardy only up to Georgia; they do best in a light sandy loam and sunny position; easily grown from seed.

—**integrifolia.** PHOT-1. Pkt. 25c

—**capensis.** PHYG-1. Pkt. 50c  
Cape Fuschia. Sub-shrubby, flowers crimson in clusters of 1-4 at end of branches; showy, 3 ft.

—**PHYLLODOCE (fi-LOH-doh-see)**  
Mountain Heath. Dwarf evergreen shrubs suitable for the rock garden, requiring moist peaty soil and partial shade. They are very hardy.

—**empetriformis.** PHYL-1. Pkt. 25c  
A heath with needle-like leaves and stems strewn with small red bells, from our western mountains; grows above timber line in grassy meadows, bogs or volcanic ash and should be treated like Heather in the garden altho it will need more moisture; very showy and choice for the sunny rock garden, 1 ft., HSH.

—**PHYSALIS (FIS-a-lis)**  
The Ground Cherry, whose tomato-like fruit is enclosed in a balloon-like calyx. They are easily grown, but may be started indoors like tomatoes so that they will fruit earlier. The Chinese Lantern plant is frequently grown for its brilliant orange "balloons" which are prized for winter bouquets.

—**minima.** PSAL-1. Pkt. 30c  
Shrubs of trees with finely cut ferny foliage, and heads or long sprays of rather small yellow flowers with a mass of golden stamens. They are hardy in the South, but in the North must be grown in a cool greenhouse, although they have been known to withstand temperatures of 20". They need no special soil or culture. Hot water should be poured over the seeds, which must soak about 48 hours before sowing.

—**PIERIS (py-ER-is)**  
Evergreen shrubs and small trees native of N. Am. and Asia, of Heath Family. They grow best in sheltered positions and some are grown in the greenhouse; moist sandy loam with peat or leaf mold best. Easily grown from seed.

—**formosa.** PIER-1. Pkt. 25c  
Drooping panicles to 6 in. long of urn-shaped white or pink tinged flowers 1/3 in. long; shrub or small tree to 20 ft., rather tender.

—**ovalifolia.** PIER-2. Pkt. 25c  
Deciduous or semi-evergreen with short sprays of oblong white bells, 40 ft.

—**PLATYCODON (plat-i-KOH-don)**  
—**grandiflorum, Mixed.** PLTY-1. Pkt. 15c  
A popular perennial of the Bluebell Family with showy white and blue flowers known as Balloon Flower. Flowers borne at end of slender leafy stems are bell or star-shaped; very useful in the rock garden or border and considered by many gardeners as the most beautiful hardy plant in cultivation; thrives in deep well drained sandy loam soil, easily grown from seed planted early in the spring.

—**PODOPHYLLUM**  
(pod-oh-FIL-um)  
Perennial plants best grown in shady places.

—**emodi.** PODO-1. Pkt. 40c  
A Himalayan relative of the common Mayapple of northern woods but much more handsome; mottled bronzy "umbrella" leaves and flowers white, mottled rich pink followed by brilliant scarlet fruits which are said to be edible; fully hardy and easy from seed which may require several weeks to germinate; woodland or shady R.G.

—**species.** PODO-2. Pkt. 50c  
Collected in western China by Dr. Hu, this has very showy red fruits and handsome branches, true name still unknown. Shade.

—**POLEMONIUM**  
(pol-ee-MOH-ni-um)  
Small genus (Phlox Family) tall and dwarf, hardy perennials, very few annuals. The blue, white or violet flowers are showy and the foliage resembling fern fronds. Thrive in deep well drained loamy soil. The dwarf species make fine rock garden plants; the taller ones for the border.

—**carneum.** POLE-6. Pkt. 25c  
—**Coeruleum gracile.** POLE-1. Pkt. 20c  
(Jacob's Ladder, Charity, Greek-vale-rian). Grows 2 ft., fern-like leaves and gorgeous sky-blue flowers with yellow stamens.

—**Coeruleum, Large Flowered Blue.** POLE-2. Pkt. 15c  
Extra large flowered strain.

—**haydeni.** POLE-3. Pkt. 20c  
A very good native western species found on rock slides, blue or white flowers, 1-ft. tall, May-Aug.

—**occidentale.** POLE-4. Pkt. 25c  
Native western bog species, robust growth.

—**pulcherrimum.** POLE-5. Pkt. 25c  
Easy and beautiful, rather short lived but self sows just enough to keep going; pale blue flowers, light woodland soils to gravels with leaf mold, gray foliage, fine rock garden plant, 6" high, HP.

—**POINCIANA (poin-si-AY-nah)**  
A very popular tropical genus of shrubs and trees of the Pec Family, all native of warm regions; when in bloom they are among the most beautiful shrubs or trees. Can be grown in the warmer parts of the South and easy from seed. Thrive in dry soils; soak seed in warm water before sowing and plant in sandy soil.

—**purpurina.** POIN-1. Pkt. 50c  
Shrubby with delicate evergreen mimosa-like leaves and very showy red and yellow flowers with long red stamens; hardy only in the far South but may be grown in the greenhouse and planted out in summer. Does well in poor sandy soil in hot dry locations.

—**POLYGALA (poh-LIG-ah-lah)**  
Milkwort. Annual and perennials found in temperate and warm regions. The

glass or in the warmer sections of the country; the hardy native species do well in light soil and partial shade.

—**artata.** POLG-1. Pkt. 30c

**POLYGONUM**

(poh-LIG-oh-num)  
Large genus of annual and perennial greenhouse and hardy plants, of variable habits. Easy culture in good garden soil. Most of the annuals can be planted early in the spring in open ground.

—**amplexicaule.** POLY-2. Pkt. 30c  
A handsome border perennial with rather heart-shaped leaves and crowded spikes 6 inches long of small rose-pink or white flowers, HP, 3-4 ft.

—**emodi.** POLY-6. Pkt. 25c  
—**orientale, Rubin.** POLY-1. Pkt. 20c  
Hardy annual, an interesting cut flower and border plant with red flowers, flowers July-October, 1 1/2 ft.

—**macrophyllum.** POLY-3. Pkt. 30c  
—**mollis.** POLY-5. Pkt. 35c  
A shrubby species, with leaves downy beneath, and long narrow panicles of small white flowers. Will grow in moist places. HB. 3 ft. or more.

—**POPPI**  
(Common name for the genus Papaver.) These beautiful flowers come in both annual and perennial sorts; they have a great range of color and we offer some new strains and varieties that are gorgeous. They are easily grown by sowing seeds direct in the garden very early in the spring and in milder climates, even in the fall; their best show is in mass plantings in the border. The annuals especially resent transplanting; full sun and well drained soil is required.

—**bracteatum.** POPY-1. Pkt. 10c  
Hardy perennial and differing from P. orientale in its solid colored petals and leafy bracts below the flowers.

—**Mac's Special Blend.** POPY-21. Pkt. 15c; 1/2 oz. 50c  
—**Sunbeam Mixture.** POPY-6. Pkt. 15c; 1/2 oz. \$1.25  
A special high class blend of varieties and new hybrids, 2 ft., full color range.

—**The Empress.** POPY-7. Pkt. 15c  
Large flowered type in delightful salmon-rose shades.

—**Sanford Giants.** POPY-20. Pkt. 15c  
Mammoth flowers with a fine range of colors, husky grower.

—**orientale, Scarlet.** POPY-8. Pkt. 15c; 1/2 oz. 55c  
Hardy perennial with large brilliant scarlet flowers. These not only will make a gorgeous showing in the border but in wild places, edge of woods and waste places, they seem to hold their own.

—**orientale, Victoria.** POPY-9. Pkt. 10c; 1/2 oz. 50c  
A beautiful salmon-pink with black blotches.

—**orientale, Mixed.** POPY-10. Pkt. 10c; 1/2 oz. 90c  
Collected from several sources both here and in Europe, and containing many fine varieties and hybrids. Scatter 1/2 oz. along the highway—very early!

—**RHOEAS-SHIRLEY POPPY:**  
(Corn or Flanders Poppy). The common field Poppy of Europe and Asia, and in the Shirley type, it has become very popular in America, coming in many colors and shades. Thin plants to 3-4 in. apart, they should be sown very early in the spring, in the South in the late fall. Hardy annuals, petals are crinkled.

—**American Legion.** POPY-11. Pkt. 10c; 1/2 oz. 50c  
A dazzling orange-scarlet with black mark, very pretty in masses.

—**Cavalcade.** POPY-12. Pkt. 10c; 1/2 oz. 35c  
Double Begonia-flowered in a rich orange-scarlet color, very large flowers and most attractive, one of the better new varieties, 2 ft.

—**Dazzler.** POPY-13. Pkt. 10c; 1/2 oz. 35c  
A beautiful double flowered orange-scarlet Begonia-flowered flower.

—**Ryburgh Hybrids.** POPY-14. Pkt. 10c; 1/2 oz. 30c  
Beautiful double Anemone-flowered in satiny shades of white, pink and old rose with white centers.

—**Sweet Briar.** POPY-15. Pkt. 15c; 1/2 oz. 30c  
Beautiful double Begonia-like flowers in a pretty Wild-Rose pink.

—**Begonia, Flowered Mixed.** POPY-16. Pkt. 10c; oz. 65c  
Showy double flowers in many colors and shades, 30 in. tall.

—**All-Double Blend.** POPY-17. Pkt. 10c; 1/2 oz. 45c  
Lovely and dainty shades in beautiful satiny flowers, many edged and shaded with other colors.

—**Single Shirley, Mixed.** POPY-18. Pkt. 10c; oz. 45c  
Contains all the single flowered varieties in huge satiny and brilliant colors; in large plantings these make a gorgeous sight. Try sowing them along roads, etc.

—**NUDICAULE:**  
(Iceland Poppy.) A perennial, to 1 ft., blooming the first year from seed and rarely lasting more than 3 years. Its flowers are very beautiful and comes in a number of charming varieties, April to June.

—**Amurensis, Yellow.** POPY-2. Pkt. 15c  
(Yellow Wonder.) Sensational new Poppy with showy buttercup yellow flowers on 2 ft. stems, easy, established plants often start blooming in March.

—**Coonara Pink.** POPY-3. Pkt. 15c  
Gorgeous rose tints of varying intensity, a true strain; soft pink to deep rose, apricot, salmon, etc., 1 1/2 ft.

—**El Monte.** POPY-4. Pkt. 15c  
A new, beautiful deep tangerine-orange large fringed flower.

—**Imperial Jewels.** POPY-5. Pkt. 15c; 1/2 oz. \$1.25  
A new superb strong stemmed flower in an extra large color range, a gorgeous display.

—**Garford Giant Hybrids.** POPY-19. Pkt. 10c; 1/2 oz. 50c  
Giant crinkly petalled flowers on long stems, ideal cut flowers if picked in bud;

beautiful colors in white, orange and reds, picotee-edged, 2 1/2-3 ft.

—**Haddon Strain.** POPY-19H. Pkt. 50c

This is an extra good strain of the Gartland Poppy, grown in England.

—**Kelmscott Strain.** POPY-22. Pkt. 20c; 1/2 oz. 50c  
The flowers of our new Kelmscott Strain are larger than we have ever seen before on any variety of Iceland Poppy, often measuring 3" across. Although the petals are of heavier texture they have the same delicate waxy appearance; the stems are longer and so much more stiffer they tend

—**Blends of all kinds.** POPY-23. Pkt. 15c

**POTENTILLA**

(poh-ten-TIL-ah)

Perennials suitable for beds and borders, with some excellent rock garden plants; thrive in sunny locations in any good garden soil but prefer sandy soils, blooming from July to September.

—**argyrophylla.** POTL-11. Pkt. 25c  
Sprays of showy yellow flowers an inch across and silky leaves; for front of border or edge of R.G. on sun, 16 in., HP.

—**climane.** POTL-10. Pkt. 25c  
—**fulgens.** POTL-9. Pkt. 25c  
A silver-leaved trailer, with beautiful salmon-rose flowers, for the border or large rock garden, HP, 1 1/4 ft.

—**gibsoni, Scarlet.** POTL-1. Pkt. 20c  
Flowers June-October, 1 ft.

—**Nepalensis, Miss Willmott.** POTL-5. Pkt. 20c  
Bright carmine, best of species.

—**White Beauty.** POTL-6. Pkt. 20c  
Fountains of snowy blossoms, foliage in autumn turns to bronze maroon, 1 1/2 ft.

—**fragiformis.** POTL-13. Pkt. 25c  
Syn. megalantha. Beautiful strawberry-like leaves of green velvet, flowers golden yellow, nearly 1" across, to 8" high, HP.

—**fruticosa.** POTL-8. Pkt. 50c  
One of the best shrubs for the rock garden bearing tiny rose-like flowers all summer; yellow or rarely pure white. A variable plant in stature and habit of growth, ranging from prostrate forms to 3 ft. bushes. Easy from seed. It may be also used as a low hedge; not at all fussy about soil or exposure.

—**nepalensis Hybrids.** POTL-2. Pkt. 20c  
Rose to rosy crimson color hybrids.

—**repans.** POTL-14. Pkt. 25c  
—**longueii.** POTL-12. Pkt. 35c  
—**Warrensi.** POTL-3. Pkt. 15c  
Large flowers in massed golden color, very good, 18 inches.

—**Potentilla Blend.** POTL-7X. Pkt. 15c  
Contains many kinds.

**PORTULACA**

(POHR-tew-lak-ka)

Usually treated as a hardy annual in the North although they are perennials. They are especially pretty in beds, borders, edging or in the rock garden, requiring full sun and average garden soil on the loamy side; they stand dry situations. Seed should be sown direct to the garden, mixing some soil with the seed and then pressing the surface of the bed so as to make a contact between the seed and the soil, sow in April. Plants are low growing and the flowers are very beautiful, 2-3 in. tall.

—**grandiflora, Double Mixed.** PORT-1. Pkt. 20c  
Extra select, the flowers look like little roses, in pink, lavender, yellow, orange and red shades, very showy, 4 in. tall.

—**Single Jewels.** PORT-2. Pkt. 20c  
A very free flowering dazzling crimson selection, about four times larger than ordinary single varieties.

—**Single Mixed.** PORT-3. Pkt. 10c; 1/2 oz. 30c  
Bright g



—**lechiangensis**. PRIM-32. Pkt. 50c  
A Primula from England for shade cool border or rock garden.

—**malacoides, Mixed**. PKIM-4. Pkt. 35c  
Fairy Primroses, a delicate looking plant popular as a winter greenhouse plant. Seeds sown in March will produce plants in late fall.

—**Heinemann's Brilliant Red**. PRIM-30. Pkt. 50c  
A beautiful new German variety from the famous Heinemann collection.

—**Heinemann's Baby Rose**. PRIM-31. Pkt. 50c  
A new Heinemann P. malacoides, in a beautiful shade of rose on a compact plant.

—**obconica, Mixed**. PRIM-5. Pkt. 50c  
It makes a very popular winter house plant for greenhouse growing. This strain has gigantea-type flowers and is in the best colors.

—**gr. fl. Mixed**. PRIM-6. Pkt. 40c  
A bright blend of one of the prominent European growers, large flowers.

—**gigantea**. PRIM-32. Pkt. 50c  
New Heinemann P. obconica in large brilliant flowers; very choice strain.

—**obliqua**. PRIM-18. Pkt. 50c  
A very beautiful species of the Nivalis group with large pendulous flowers varying from white to deep yellow and rarely to flesh or pink. It needs rich soil in very light shade and should, if possible, be planted where it is buried in snow all winter, otherwise it should be carefully covered with rock wool while dormant.

—**reticulata**. PRIM-21. Pkt. 50c  
Rather similar to P. sikkimensis, with drooping yellow bells; young seedlings are rather delicate but become more vigorous the second season, 1 ft., HP.

—**royale**. PRIM-35. Pkt. 50c  
Purple-crimson flowers, 15" tall.

—**sapphirina**. PRIM-22. Pkt. 50c  
A tiny species, with small leaves and short stems bearing one to four rather small flowers of brilliant deep blue. Not one of the easiest species, requiring cool rich gritty soil and ample moisture during the growing season. HP. 2-in.

—**sikkimensis**. PRIM-21. Pkt. 50c  
An easily grown species with long-petioled basal leaves and foot-high naked stems from which dangle a cluster of drooping yellow flowers. Seed germinates readily, and the plants will grow in sun if given plenty of moisture. HP. 1 ft.

—**smithiana**. PRIM-24. Pkt. 50c  
Close to P. bulleyana, a species with whorls of yellow flowers in midsummer; likes moist locations by stream or pool in light shade, 1-2 ft., HP.

—**sinensis fimbriata Mixed**. PRIM-7. Pkt. 50c

Chinese Primroses. Popular greenhouse flowering plants blooming in late autumn from March sown seed. They are much like P. malacoides in appearance. This strain has fimbriated petals. Extra choice.

—**fimbriata Mixed**. PRIM-8. Pkt. 35c  
Giant sized flowers, fringed petals.

—**Giants**. PRIM-9. Pkt. 50c  
Made up only from the giant flowering varieties, very extra.

—**Fringed**. PRIM-10. Pkt. 50c  
A Holland strain of the best fringed varieties.

—**vaginata**. PRIM-22. Pkt. 50c  
Like a tiny Geranium in leaf, with wine-colored flowers; may be somewhat tender and should be grown in a sheltered shady place in leafmold.

—**oris elatior**. PRIM-11. Pkt. 25c  
Oxlip. Pretty little Wild Primrose of N. Europe, 5 in. tall with nodding yellow flowers.

—**White Swan**. PRIM-12. Pkt. 35c  
A pretty white flowered variety.

—**Hybrids**. PRIM-13. Pkt. 35c  
Extra choice strain of this hardy species.

—**wattii**. PRIM-34. Pkt. 50c  
Funnel-shaped, drooping, purple flowers.

## PROBOSCIDEA

### (pro-'bo-SID-ee-ah)

Proboscis Flower, Unicorn Plant. Annual and perennial with large, long stemmed leaves, large purple flowers and okra-like fruits.

—**juissieul**. PROB-1. Pkt. 15c  
Listed incorrectly as Martynia. Native from corn belt southward and grown both for ornament and for its fruits, which when soft and immature are pickled, either alone or with other vegetables. In the North start indoors under glass and set out after danger of frost is passed. Set out like cucumbers.

## PRUNELLA (proo-NEL-ah)

Brunella. Small perennial plants of Mint Family, with purple or violet flowers in close-set heads or spikes. Used in shady part of border and rock garden. Are easily naturalized in the wild garden.

—**gr. fl. rosea**. PRUN-1. Pkt. 20c  
Many spikes of rose colored flowers rise from flat foliage mats, excellent rock garden or edging plant, 1 ft.

## PRUNUS (PROO-nus)

A genus of stone fruits, many valuable orchard fruits. Many are very hardy in the North and they have very showy flowers.

—**acuminata**. PNUS-1. Pkt. 25c  
—**nepalensis**. PNUS-2. Pkt. 25c  
—**prostrata**. PRUN-3. Pkt. 35c

## PYRACANTHA

### (pir-ah-KAN-thah)

Firethorn. Mostly thorny shrubs belonging to Rose family; where hardy they are beautiful shrubs; a sunny position, well drained soil is best.

—**atalanoides**. PYRA-1. Pkt. 25c  
Gibbsi. Regarded as one of the best; small dark green leaves and masses of very brilliant scarlet berries; best trained as a climber.

## QUAMOCLIT (KWAM-oh-kliit)

Annual and perennial twining vines belonging to the Morning Glory Family, often called Star Glory; treat as tender annuals; easily grown from seed; used as summer flowering vines of light and rapid growth, thriving in rather light soils and in sun.

—**lobata**. QUAM-1. Pkt. 20c  
Robust perennial with 3-lobed heart-shaped leaves and crimson flowers fading to pale yellow.

—**pinnata**. QUAM-2. Pkt. 20c  
Cypress Vine. Slender annual twiner to 20 ft. with leaves divided into fine thread-like segments and showy scarlet

flowers. Easily grown; blooms mid-summer till frost.

—**sloteri**. QUAM-3. Pkt. 20c  
Cardinal Climber. A hybrid between Q. coccinea and Q. pinnata. Palmately-lobed leaves and cardinal-red flowers with white throats. Grows 30 ft. blooms from mid-summer till frost.

—**Mixed**. QUAM-4. Pkt. 15c

## QUEEN ANN'S LACE

—**Daucus carota**. QANL-1. Pkt. 10c; oz. 65c

An annual cut flower, 2-2½-ft. tall, with finely cut foliage and filmy white flowers in umbels. It makes a very good cut flower for a filler, is easily grown. Do not allow it to go to seed as it can become a weed.

## RAMONDA (ra-MON-dah)

Ramondia. Small plants making flat rosettes of hairy basal leaves, stems 3-4 in. bearing several 4-5 pointed flat flowers, resembles Saintpaulia to which it is related. Fully hardy, likes north facing crevices in rock wall, soil largely leaf mold and sand. Sow seeds as for Saintpaulia, seedlings develop slowly.

—**pyrenaica**. RAM-1. Pkt. 50c  
Brilliant lavender flowers Primula-like flowers, for north rock wall. 4 in., HP.

## RANUNCULUS

### (rah-NUN-keu-lus)

A large genus widely distributed and known under the names of Buttercup and Crowfoot. The Buttercups are perennial and easily grown from seed; the Crowfoots have yellow flowers and both do well in well drained soil and sunny positions. Most of the species are perennial. Many of the Crowfoots make fine rock garden plants.

—**ASIATICUS**: (Turban or Persian Buttercup). It is grown in the greenhouse or outdoors during summer and not considered hardy. It has tuberous roots which should be taken up and stored over winter. It must be grown cool and likes a moist atmosphere.

—**hirtellus**. RUN-4. Pkt. 50c  
A very variable Asiatic species and in its best forms, with 2 inch flowers of yellow, white or pale rose, on short stems; perennial and a plant well worth gambling on.

—**lindleyi**. RUN-5. Pkt. 25c

—**montanus**. RUN-6. Pkt. 35c

—**superbus**. RUN-3. Pkt. 25c  
Beautiful spring flowers in shades of pink, white, red, yellow and rose; sow seeds in flower pot, covered with glass as germination requires 30-40 days, perennial.

## RASPBERRY

—**Crimson**. RASP-1. Pkt. 20c  
From the Himalayan Mountains.

## RHODANTE

—**manglesi**. RHOD-2. Pkt. 10c  
Rose, everlasting, hardy annual.

## RHODODENDRON

### (roh-doh-DEN-dron)

They are easy to grow if given a few some special attention to their requirements. They all prefer acid soils, most of them do best in partial shade and the evergreen sorts need wind protection. All dislike hot sunshine. Their gorgeous flowers and magnificent foliage well repay those who give them the attention necessary. About all are at home on the Pacific coast, they also can be grown in the South but in the North only the hardy species should be attempted. They all require an acid soil between pH 4.5 and pH 5.2, containing much fibrous material; the roots grow near the surface and thus should be provided with moisture but not a soggy soil.

—**aeruginosum**. RODN-1. Pkt. 75c  
A compact head of about 10 flowers 1½ in. long, lilac rose to reddish purple spotted with deeper color, 6-8 ft. (Campanulatum Series).

—**albrechtii**. RHON-24. Pkt. 75c  
A deciduous Azalia with vivid rose flowers and leaves that turn bright yellow the Autumn; hardy to Boston; late blooming and fine for open woodland, Azalea series, Camadense subspecies, 3-5 ft.

—**anthopogon**. ROHN-3. Pkt. 75c  
An alpine species with fair-sized pink flowers resembling Daphne in appearance, 2 ft. It is said that this species cannot endure clay soil and it needs an open northerly exposure. (Anthopogon Series)

—**arboresum**. RODN-2. Pkt. 75c  
A glorious tender tree-like species, for mild climates only. The flowers are up to 2 inches across, deep scarlet with deeper dots and in huge clusters. Grows as much as 40 ft. (Arboresum Series).

—**barbatum**. ROHN-4. Pkt. 75c  
Another rather tender tree-30-60 ft. high with somewhat smaller flowers of deep crimson or blood red, in dense trusses. (Barbatum Series).

—**camelliaeflorum**. ROHN-5. Pkt. 75c  
Sometimes epiphytic, rather tender, with flowers inch-wide, white tinged pink and borne singly. For greenhouse culture in the North, 2-6 ft. (Camelliaeflorum Series).

—**campanulatum**. RHON-6. Pkt. 75c  
Loose trusses of flowers 1½ inch long, ranging in color from white to shades of purple; a very early bloomer, shrub 12-19 ft. tall. (Campanulatum Series).

—**campbelliae**. ROHN-20. Pkt. 75c  
—**formosum**. RHON-25. Pkt. 75c  
Sweet scented, flowers 2 in. long, white flushed yellow and rose; very beautiful species and not hardy in N. Maddenii Series (Gibsoni).

—**campylocarpum**. RHON-7. Pkt. 75c  
Perhaps the finest yellow-flowered species, a moderate-sized rounded bush, 4-8 ft. tall. Has loose trusses of flowers 1½ in. long and 2 in. across, clear canary-yellow or pale yellow, sometimes with a faint crimson blotch at the base. (Thompsonii Series).

—**clitatum**. RHON-8. Pkt. 75c  
A tender species for greenhouse or very mild climates, with 2 in. flowers either white or tinged rose; extremely free flowering and handsome; 3 ft. tall. (Maddenii Series).

—**cinnabarinum**. RHON-9. Pkt. 75c  
A magnificent species with rather tubular flowers up to 2 in. long, of cinnabar or brick-red, free flowering. Well worth trying, especially south of New York, 6 ft. (Cinnabarinum Series).

—**dalhousiae**. RHON-10. Pkt. 75c  
An epiphyte with fragrant flowers, 3½ in. long, white tinged externally with rose; lemon scented. For cool greenhouse, and one of the finest of all species. (Maddenii Series).

—**eleaginoideis**. RHON-11. Pkt. 75c  
A very small alpine shrub with solitary bright yellow or reddish purple flowers about 1 in. across. For slightly shaded positions in the rock garden. (Lepidotum Series).

—**falconeri**. RHON-21. Pkt. 75c

—**fulgens**. RHON-12. Pkt. 75c  
Large bright scarlet flowers on a medium sized shrub and very early flowering; from high altitudes and fairly hardy. (Campanulatum Series).

—**glacum**. RHON-13. Pkt. 75c  
A dwarf shrub with inch-long flowers of pale old rose; very aromatic foliage. A good one for the front of the border. (Glacum Series).

—**grande**. RHON-14. Pkt. 75c  
A magnificent small tree with enormous leaves and big flowers of white or cream with purple blotches, in big clusters, pink in bud. Hardy on the West Coast. (Grande Series).

—**Griffithianum**. RHON-22. Pkt. 75c  
A magnificent species with flowers up to 2½ in. long and 6 in. across, white with green spots often flushed with pink, a shrub to 10 ft., tender (Fortunei Series).

—**hodgsonii**. RHON-15. Pkt. 75c  
A tall shrub with rather small flowers that open dark magenta-purple and fade to a dull lilac. The shiny green foliage is particularly handsome; rather tender. (Falconeri Series).

—**Lady Alice Fitzwilliam**. RHON-26. Pkt. 75c

Very fragrant huge white flowers, tender, beautiful.

—**lanatum**. RHON-16. Pkt. 75c  
A bush or small tree with good sized flowers of pale yellow with crimson spots; one of the more fussy species but attractive when well grown. (Campanulatum Series).

—**Maddenii**. RHON-23. Pkt. 75c  
Very sweet scented white flowers 1¾ in. long, tender but fine for the cool greenhouse, 9 ft. (Maddenii Series).

—**ponticum**. RHON-21. Pkt. 75c  
A tall and vigorous growing species from Asia Minor with rather narrow leaves and head of 10-15 lilac-purple flowers about 2" across. Much grown in England and is one of the parents of many garden hybrids; not quite hardy N. of Philadelphia, it is very useful for grafting stock even in cold regions; mass plantings in light woodlands can be very effective.

—**thompsonii**. RHON-17. Pkt. 75c  
One of the finest of all, 2 inch flowers of deep blood red, fleshy and waxy, extremely free blooming. A tall bush, with rounded bluish-green leaves. Unfortunately attempts to grow it outside in the East have not been successful. (Thompsonii Series).

—**var. candelabrum**. RHON-18. Pkt. 75c  
A variety with paler colored flowers.

—**wightii**. RHON-19. Pkt. 75c  
A small tree with large rounded umbels of pale yellow flowers, spotted with crimson. Very attractive and early flowering; this has not been tried in the East to our knowledge. (Lacteam Series).

## RHEUM (REE-um)

A strong and vigorous growing Asiatic genus of perennials of which the Rhubarb is the most popular, here. Other species are used for bold effect in the border.

—**mobile**. RHOM-1. Pkt. 40c  
The stem is densely covered with overlapping downward pointing bracts, which are strikingly effective; a fine plant for foliage effect, especially when young with its white leaves and stems; much well in winter, 4 ft., HP.

—**acuminatum**. RHOM-2. Pkt. 50c  
A relatively dwarf shrub with stems and flowers a deep red-purple; most effective against background of foliage, HP. 2-3 ft.

## RHODCHYPOXIS

### (roh-doh-HY-pok-jis)

Beautiful little bulbous plants from So. Af., very rare in cultivation; making a dense tuft of short grassy leaves and bearing throughout the summer, flat 6-pointed stars ¾ in. across; like moist but well drained sandy soil, in half shade; hardiness uncertain but will stand 20 degrees. They can be wintered in a cool basement window, apparently they prefer not to dry out completely.

—**baurii**. RHOM-1. Pkt. \$1.00  
The most showy with brilliant rose to white flowers, flowering all summer and makes a charming pot plant as well; slow to increase and very rare in seed; from Basotoland; cool positions, hardy.

## RICINUS (RIS-i-nus)

Castor Oil Bean. Tender annuals grown for their tropical foliage effect as centers to large beds; start seeds indoors in small pots for early plants, soil should be rich and well drained. The seed is recommended for ridding gardens of moles, placing the seed in the runways; the seeds are poisonous—do not let children play with them.

—**borboniensis arboreus**. RIC-1. Pkt. 10c; oz. 25c  
One of largest types, red stems and red leaves with a flower to 10-ft.

—**cambodensis**. RIC-2. Pkt. 10c; oz. 25c; ¼ lb. 60c  
Dark foliage, blackish purple stems.

—**Major**. RIC-4. Pkt. 10c; oz. 25c; ¼ lb. 60c  
(Communis). Tall true Castor Oil Plant. Leaves large, sometimes 3-ft. across.

—**zanzibariensis**. RIC-6. Pkt. 10c; oz. 25c; ¼ lb. 60c  
A large variety with little if any red color to the foliage, large flat seeds, mottled bright red over gray or brown ground color.

—**viridis**. RIC-7. Pkt. 10c; oz. 25c; ¼ lb. 60c  
Green foliage, 10-12-ft.

—**Mixed**. RIC-8X. Pkt. 10c; oz. 25c; ¼ lb. 55c

## ROHDEA (ROH-dee-ah)

—**japonica**. ROHD-1. Pkt. 25c  
Sacred Lily of China. Highly ornamental foliage plant for pot culture, useful for house culture. They can be grown outdoors in a shady place in mild climates.

## ROSE

We list here those species of the genus Rosa that are shrub-like and that can be grown from seed. The seed, as a rule, should be planted outdoors in late autumn or early spring, best in a frame, for protection.

—**multiflora**. ROSE-3. Pkt. 20c  
The thorny type, trailing or climbing

shrub with fragrant white flowers like clustered blackberry blossoms. Use as under stock for garden roses.

—**polyantha nana**. ROSE-1. Pkt. 20c  
This is a selection with flowers in white, blue or pink and rose, the flowers are tiny and cover the bush. Easily grown from seed, and many even form flowers the first year. Fine for rock garden, edging or pot plant, perennial.

—**sericea**. ROSE-2. Pkt. 25c  
Himalayan Wild Rose. Single white flowers.

## RUBUS (ROO-bus)

Brambles. Native shrubby plants of the colder regions, belonging to the Rose Family. Some are especially good fruits and a few grown as ornamentals.

—**moluccanus**. RUBS-1. Pkt. 20c  
Very robust species with very variable leaves, white flowers and red succulent fruits; a tropical species, perhaps tender.

## RUDBECKIA (rud-BEK-i-ah)

Coneflower. Conical shaped disks of daisy-like flowers; they thrive in any soil and either sun or partial shade, the seeds can be planted early outdoors or started indoors. They are sturdy growers and make fine displays in mass plantings in the border.

—**complexicanlis**. RUD-1. Pkt. 15c  
3-ft. tall, flowering July-Sept., golden yellow with dark black center.

—**Autumn Tints**. RUD-2. Pkt. 10c; ¼ oz. 30c

Golden yellow petals with dark centers, in many different shades, 1-1½-ft. tall, they make a showy display in the autumn when most flowers are gone.

—**bicolor, Golden Sunset**. RUD-3. Pkt. 10c  
Double, golden flowers, hardy annual.

—**flava**. RUD-4. Pkt. 15c  
Perennial, blooming May-June, 2-ft., golden yellow flowers and dark centers.

—**hirta, Herbswald**. RUD-5. Pkt. 15c  
A Swiss novelty, biennial cut flower, flowering first year; mostly red colored.

—**Star of Kevodon**. RUD-7. Pkt. 10c  
Golden yellow with dark brown central disc, long stems, 2-2½-ft. biennial.

—**My Joy**. RUD-10. Pkt. 20c  
A new German variety, large pure golden yellow with black center, 4-in. across, 2-ft. perennial. It is an exceptionally good cut sort, June-Frost.

—**New Hybrids**. RUD-9. Pkt. 10c  
This contains many different forms and will produce a mass of cut flowers. Perennial.

—**newmanni**. RUD-12. Pkt. 20c  
Large flowers of pinkish petals and large dark cone, petals hang downward giving it an extra pretty effect, fine both as a border plant or for cutting. July-Sept., 2-ft., perennial.

—**purpurea gr. fl.** RUD-11. Pkt. 15c  
Giant Purple Coneflower. Large reddish purple flowers 4-in. across with a black purple cone, 3-ft., blooms all summer, perennial.

—**Starlight**. RUD-13. Pkt. 15c  
Large semi-double flowers ranging from primrose yellow to mahogany with many showy bicolors having mahogany centers, 3-ft., blooms all summer, hardy annual.

—**Rudbeckia Blend**. RUD-14X. Pkt. 15c; ¼ oz. 50c

Made up of many varieties and in all species including all those offered above with hybrids also. A lot of beautiful flowers till frost.

## RUMEX (RU-meks)

While most are weeds and not suitable for gardens, we list those that do have garden value. Easily grown from seed.

—**flexuosus**. RUEM-1. Pkt. 30c  
A curiosity from New Zealand, like a brown seaweed, probably not very hardy.

## SABAL (SAY-bal)

Palmetto. About 20 species of spineless and often stemless palms, native from N.C. southward. Those that make trunks are very ornamental and can be grown in tubs and wintered in the greenhouse.

—**texana**. SABL-1. Pkt. 50c  
Texas Palm. A small ornamental palm native of Texas.

## SALPIGLOSSUS

### (sal-pi-GLOS-is)

Painted Tongue. Half hardy annuals from Chile, the "Paisly Flower", suggests well the exotic beauty of its coloring; rich velvety tones of purple, blues, yellow reds and white veined with gold. Flowers funnel-shaped, 2½-in. across. They make their best growth during cool weather, flowering in July till frost; they are highly prized as cut flowers. Best in sandy soil and partial shade, not too rich for best coloring; started about July they make fine winter plants for indoors. Height 2-ft. They can be planted amongst perennials. The seed is very small and care must be used in planting them, germinate them in light and warm. All are of species of sinuata or its variety, superbissima, which is unbranching and thus more upright or columnar.

—**Dwarf Giant Flowered**. SALP-1. Pkt. 20c  
A shorter more bushy type with large flowers in a beautiful color range, 1½-ft.

—**Emperor**. SALP-2. Pkt. 20c  
(Superbissima). More upright growth; this is definitely a superior strain, outstanding in size and color of flowers and vigor; grown from the finest separate colors with heavy gold throat veining, 3-ft.

## SAUSSUREA (sau-SEU-ree-ah)

Temperate zone plants of Composite Family with heads of blue or purple disk flowers; easily grown from seed and ornamental in the border.

—**gossypiphora**. SAUS-1. Pkt. 50c

## SANVITALIA

### (san-vi-TAY-li-ah)

A genus of small American plants whose flower heads resemble Rudbeckias. Easily grown as annuals in dry warm rich soil and with winter protection may grow as biennial.

—**procumbens, Double**. SANT-1. Pkt. 15c  
A low hardy annual border plant called Creeping Zinnia, blooming in late summer and fall; small orange-yellow Zinnia-like double flowers on trailing plants for hot dry situations and rock gardens.



- Pkt. 20c**  
—diversifolia. **SAX-4. Pkt. 35c**  
Forms large clumps of leathery egg-shaped leaves with leafy stems bearing a number of golden stars 1/2-3/4 inch across. Likes marshy places or will grow in a shaded foundation planting if not too dry; rather too large for the rock garden, HP, 8-18 inches.
- godeffieriana. **SAX-15. Pkt. 35c**  
—ligulata. **SAX-2. Pkt. 25c**  
Very low growth, rhizomatous plant, with pink flowers and ornamental leaves; best for rockery.
- irvingii. **SAX-16. Pkt. 25c**  
—obisili. **SAX-17. Pkt. 25c**  
—purpurascens. **SAX-3. Pkt. 35c**  
A very handsome species of the Mesquaca type, with large glossy leaves, clump-forming, and nodding purple bells; foliage turns red in autumn. For the shady border or edges of the rock garden, easy and vigorous, HP, 9 inches.
- sancta. **SAX-18. Pkt. 25c**  
—virginensis. **SAX-20. Pkt. 25c**

**SCABIOSA (skay-bi-OH-sah)**

- Mourning Bride or Pin Cushion Flower. Easily grown in an open sunny situation, seeds being either started indoors or planted direct to garden; pinching back the annual forms will produce nice bushy plants; keep flowers cut and they will bloom all summer, excellent cut flowers. As the annual forms flower, best in the early part of the season, start seed early for the best bloom, in milder sections sow in the fall.
- caucasica, House Hybrids. **SCAB-1. Pkt. 25c**  
Green and bronze foliage, 10-12 ft. Many beautiful varieties mixed.  
These improved giant hybrids are exquisite in the garden and an excellent cut flower, one of the loveliest perennials. Colors light and dark blue, and various mauves and lilac shades.
- columbaria, Lavender. **SCAB-2. Pkt. 20c**  
Delicate Lavender. Perennial in an attractive lavender-blue, 1 1/2 ft.
- Delicate Pink. **SCAB-3. Pkt. 20c**  
Orchid pink with a pink sheen, 2 ft.
- Imperial Giants, Hybrids. **SCAB-4. Pkt. 10c; 1/2 oz. 50c**  
A great advance in annual Scabiosa development extremely large well formed flowers which are fully double, composed entirely of broad frilly petals, rounded bee-hive shape; plants very upright, long wiry stems and excellent for florist or garden planting; new and unusual colors, 3 1/2-4 ft.
- Imperial Giant, Blue Moon. **SCAB-5. Pkt. 10c; 1/2 oz. 60c**  
Large dark lavender-blue, made up of broad, heavy, waxy petals without the pin-cushion center, pretty.
- Giant Flowering Hybrids. **SCAB-6. Pkt. 20c**  
An extra select large flowering compact hot house strain.

**EIGHT SPECIAL STRAINS ANNUAL**

- SCABIOSA:**  
Definitely a much better strain than the ordinary strains; selected by one of the best flower seed growers thru many years, these varieties have been improved to near perfection in purity, size of bloom, as well as in the length of the strong wiry stems. We especially recommend these varieties to critical Scabiosa growers.
- Ageratum Blue. **SCAB-7. Pkt. 10c; oz. 90c**  
Pretty light blue.
- Azure Fairy. **SCAB-8. Pkt. 10c; oz. 90c**  
Azure blue, fine color.
- Loveliness. **SCAB-9. Pkt. 10c; oz. 90c**  
Salmon rose shades.
- Orchid Shades. **SCAB-10. Pkt. 10c; oz. 90c**  
Soft rose-lavender blends.
- Peach Blossom. **SCAB-11. Pkt. 10c; oz. 90c**  
Peach blossom pink.
- Rosette. **SCAB-12. Pkt. 10c; oz. 90c**  
Deep suffused salmon.
- Salmon Beauty. **SCAB-13. Pkt. 10c; oz. 90c**  
Pure salmon, rich coloring.
- Shasta Improved. **SCAB-14. Pkt. 10c; oz. 90c**  
Pure white of enormous size.
- Blend of Above 8 Varieties. **SCAB-15X. Pkt. 10c; oz. 90c; 1/4 lb. \$3.00**

**SCHIZANTHUS**

- (sky-ZAN-thus)**  
Beautifully marked and unusually formed flowers in chamomile, rose, lavender, and purple shades with fern-like foliage. Excellent for pot culture the year round and partly shaded beds, doing best in cool climates; pinch tops of young plants to induce bushy plants; for winter use, sow in Sept., for February to May bloom; for summer bloom outdoors, sow indoors in March, setting plants out when weather becomes warm in May. Schizanthus makes up beautifully in corsages, are long lasting and very pretty, 1 1/2 ft.
- Dr. Badger's Hybrids. **SCHZ-1. Pkt. 20c**  
Large flowers, brilliant range of colors from light pink to deep purple through rose, but without any whites. Each flower with a large golden blotch. Plants compact, 12-14 in. tall. Outstanding for the best florist's trade.
- Butterfly Mixture. **SCHZ-2. Pkt. 15c**  
A fine bright mixture free flowering, compact pyramidal plants, 12-15 in.
- Chislehurst Hybrids. **SCHZ-4. Pkt. 15c**  
A large flowered pretty French strain in violet and purple shades.
- Schizanthus Blend. **SCHZ-5X. Pkt. 15c; 1/4 oz. 95c**  
Blend of above strains and others from different growers. High class in every way.
- wisetonensis. **SCHZ-6. Pkt. 20c**  
Hybrid between S. pinnatus and S. grahni showing many variations in color and form, rose shades, 16 in.

**SEDUM (SEE-dum)**

- Mostly hardy, succulent or fleshy, erect or prostrate plants, easily grown and of much use in rock gardens. They do best in a light soil and a sunny location; no rock garden can be considered complete without its Sedums; they are especially appealing to children. Sow seed in summer when the seedlings can be wintered over for setting out in their permanent position in the spring, or they

can be started in the spring.

- acra. **SEDM-2. Pkt. 25c**  
—caeruleum, azureum. **SEDM-1. Pkt. 20c**  
Blue flowered annual for rockery.
- tatarinowii. **SEDM-4. Pkt. 25c**  
—liebergii. **SEDM-3. Pkt. 25c**

**SENECIO (se-NEE-shi-oh)**

- Groundsel. Large and variable genus, herbs, shrubs and trees belonging to Daisy Family, including the florist pot plant Cineraria. In general, they are easily grown in good loamy soil.
- diversifolia. **SENE-5. Pkt. 25c**  
Low growing shrub with lewyow flowers.
- jacqmontiana. **SENE-6. Pkt. 15c**  
Collected in the Himalayas, but we have no description as yet.
- purshiana. **SENE-3. Pkt. 20c**  
A native western species, light gray foliage, 6-10 inches tall.
- scandens. **SENE-4. Pkt. 25c**  
Very attractive low climber with loose panicles of yellow-rayed daisies in summer; fairly hardy but should have some winter protection in N. Fine grown against a south wall, HHP, 3-4 ft.
- SIDALCEA (si-DAL-see-ah)**  
Flowers are like miniature Hollyhocks in spikes or clusters; should be planted in rich sandy soil; the perennial species bloom over a long period; usually about
- Stark's Hybrids. **SIDA-1. Pkt. 15c**  
Hardy perennial in a wide color range; flowers like miniature Hollyhocks, 3-ft.

**SIEVERSIA (se-VER-se-a)**

- A small group of Western plants closely related to, and often called, Geum; one or two are also found in N.E. Asia. They are rather dwarf, hardy perennials, with compound leaves and gum-like flowers, but are much more hardy; suited to the rock garden or wild garden. Culture same as for Geum.
- ciliata. **SIEV-1. Pkt. 30c**  
Soft, rather hairy deep cut leaves and flowers of old rose and cream followed by plummy seed heads. A plant of cool grassy meadows in the Rockies, easily grown in the rock garden in full sun or light shade, likes a fair amount of moisture, HP, 6-18 inches.

**SILENE (sy-LEE-nee)**

- Catchfly. Annual, biennial and perennials of the Pink Family, in all forms in many species. Many are showy and of value in the garden or rock garden. If seed of the annuals is sown in the fall much earlier flowers will be secured.
- acaulis. **SILE-8. Pkt. 25c**  
—alpestris flora pleno. **SILE-9. Pkt. 25c**  
—armeria pendula. **SILE-1. Pkt. 10c**  
Double Mixed. A smooth plant with clusters of rose and white flowers; July-Sept. Sow seeds in position in late fall or early spring, 20 in.
- compacta, Peach Blossom. **SILE-2. Pkt. 15c**  
Dwarf Double. Soft hairy foliage and flesh colored flowers in graceful drooping racemes, mid-summer, 10 in.
- New Art Shades. **SILE-3. Pkt. 15c**  
Dwarf Double. A splendid mixture containing all the new colors; a choice rock garden strain.
- White. **SILE-4. Pkt. 10c**  
Lobel's Catchfly. Hardy annual, 6 in. in pure white.
- fortunei. **SILE-5. Pkt. 10c**  
Bright rose, perennial best grown as a hardy annual.
- hookeri. **SILE-7. Pkt. 50c**  
One of the loveliest of all rock garden plants, not as easy as most Silenes but not really difficult; large salmon-pink flowers, heavy to light soils with humus and grit, ground cover, sun or light shade, HP.
- schaffa. **SILE-6. Pkt. 15c**  
Perennial, rosy-purple flowers, trailing habit; pretty border or rock plant, 6 in.

**SILLA**

- Mixed Colors. **SILL-1. Pkt. 30c**  
Hispanica and Campanulata, Mixed, pink, white and blue flowers.
- SISYRINCHIUM**  
**(sis-i-RIN-ki-um)**  
Blue-eyed-grass. American grass-like perennials with small blue or yellow flowers. Very attractive in colonies in an open rather moist spot or wild garden; have fibrous roots and transplant easily and easily grown from seed.
- californicum. **SISY-4. Pkt. 25c**  
Lust green foliage and bright yellow flowers.
- angustifolium. **SISY-2. Pkt. 25c**  
—grandifolium. **SISY-1. Pkt. 50c**  
The finest of the N. Am. grass flowers, a fine rock garden plant for sun or light shade and this will withstand summer drought, HP.
- striatum. **SISY-3. Pkt. 25c**  
Forms large clumps and resembles an Iris when not in flower; flowers creamy yellow, blooming over long time, stems 3 ft. Attractive specimen plant.

**SMILACINA (smy-lah-SY-nah)**

- Perennial woodland plants called False Solomon's Seal. (Lily Family). They have creeping root stalks, leafy stems and small flowers in terminal clusters followed by red of greenish berries. Easily colonized in the wild garden.
- stellata. **SMIL-1. Pkt. 20c**  
Wild Lily-of-the-Valley. Pretty white flowers, 8-12 in. tall, May-June. Found in the north-western states.

**SOLANUM (soh-LAY-num)**

- A very large genus, the species most of interest having colored berries which are very decorative; they usually are grown as pot plants for winter use. Commonly known as Jerusalem Cherry.
- capsicastrum nanum. **SOLN-1. Pkt. 15c**  
Greenhouse plant, 15-in. tall, having small red ornamental fruits.
- Clevelandi. **SOLN-2. Pkt. 20c**  
A select variety of Jerusalem Cherry, nice foliage and bright fruits, for pots.
- Hlavacek's Masterpiece. **SOLN-3. Pkt. 20c**  
Compact variety, 15-in., bright berries.
- Henderson, New Paterson. **SOLN-4. Pkt. 20c**  
Upright, orange-red, compact, 12 in.

- ciliatum macrocarpum. **SOLN-5. Pkt. 25c**  
Scarlet fruits.
- nigra. **SOLN-10. Pkt. 35c**  
—racemigerum. **SOLN-6. Pkt. 20c**  
Red Currant Tomato.
- verbascum. **SOLN-11. Pkt. 25c**  
—Mixed Solanum. **SOLN-7X. Pkt. 15c**  
All species and varieties mixed.

**SOLDANELLA**

- (sol-dah-NEL-ah)**  
Perennial plants of Primrose Family having nodding blue, violet or white fringed flowers, native of Alps. Plant in moist shady places in rock garden.
- alpina. **SOLD-1. Pkt. 25c**  
Grows 6-in. tall, roundish leaves and pale blue fringed flowers.

**SOLIDAGO (sol-i-DAY-goh)**

- Erect perennials, with golden yellow Goldenrod flowers. The Goldenrod is a very common and popular flower, it being the state flower of Nebr., Ky., and Ala.
- elongata. **SOLI-1. Pkt. 20c**  
Tall Goldenrod. A western species from Mont., compact flower clusters, yellow flowers, 1-3 ft. tall, July-Aug.
- missouriensis. **SOLI-2. Pkt. 20c**  
Dwarf Goldenrod. Western species, yellow flowers 6-8 in. tall, flowering June-Aug.

**SOPHORA (soh-FOH-rah)**

- Showy when in bloom and of ornamental value can be grown from seed.
- Mostly deciduous trees; very showy when in bloom and ornamental on the lawn; most are too tender for the N. but they make fine specimens in the S. Thrive in well drained sandy loams.
- mollis. **SOPH-1. Pkt. 35c**  
—tomentosa. **SOPH-1. Pkt. 50c**  
Ornamental shrub 5-7 ft. with racemes of showy yellow flowers, native of Texas.
- secundiflora. **SOPH-2. Pkt. 50c**  
Mescal-bean. Not hardy North; fragrant violet-blue flowers, 1 inch long; seeds are poisonous if eaten.

**SPHAERALCEA**

- (sfee-RAL-see-ah)**  
Globe Mallows. Warm region plants and shrubs grown in gardens for their red and violet flowers. The flowers are mallow-like.
- rivularis. **SPHA-1. Pkt. 20c**  
Wild Hollyhock. This is good in the border, a western species, pink flowers, 3-5 feet, June.

**SPRAGUEA (SPRAY-ge-ah)**

- Pussy-paws. Small alpine plants with rosettes of thick fleshy evergreen leaves and heads of fluffy pink flowers on short nearly prostrate stems. For the rock garden in very light shade.
- multiceps. **SPRG-1. Pkt. 25c**  
This seems to be the only known species; from the mountains of the N.W., light sandy soils with trace humus; flowers pink to dark red, for rock garden, 1" tall, HP.

**STATICE (STAT-i-see)**

- Sea Pinks, Thrift. Consist of dwarf perennial plants much used in rock gardens and for edging; included are those formally classed under Armeria (ahr-MEE-ri-ah), but the plants usually called Statice as grown in gardens and by florists are Limonium, which see. They are easily grown in ordinary garden soil.
- armeria, Var. alpina. **STAT-1. Pkt. 15c**  
A bright rose perennial, foliage a compact tuft, for cutting or border; does best in dry sandy soil and sun; flowers are on stiff wiry stems above foliage tipped with dense globe-shaped flowers; May-June; HP, 6 in.
- caespitosa. **STAT-9. Pkt. 25c**  
True variety. Charming for a crevice in the R.G. in sunny position; compact tiny growth to 2", short dark green leaves, pure pink flowers, HP.
- caspia. **STAT-7. Pkt. 15c**  
A dwarf species for the sunny R.G. with sparsely of pale lilac flowers, 6 in., HP.
- formosa Hybrids. **STAT-2. Pkt. 15c**  
Deepest to lightest rose shades of pink, coral and light reds, charming mixture, perennial, 1 1/2 ft.
- America formosa hybrida. **STAT-2T. Pkt. 25c**  
Large flowers in many shades, HP, 1 1/2 ft.
- Giant Pink. **STAT-3. Pkt. 20c**  
Clear rose pink flower 2 in. across, borne freely on straight strong stems, 1 ft. to 1 1/2 ft. above growing mat-like plants, 2 ft.
- Large Flow. Hybrids. **STAT-4. Pkt. 20c**  
The largest and best hybrids, 1 1/2 ft.
- perexii. **STAT-8. Pkt. 25c**  
Rich bright blue, HP.
- tatarica. **STAT-5. Pkt. 15c**  
Perennial, rose colored.
- Statice Blend. **STAT-6X. Pkt. 10c**  
All species and varieties.
- Six Hills Hybrids. **STAT-10. Pkt. 25c**

**STRELITZIA (stre-LIT-si-ah)**

- Bird of Paradise. Plants of Banana Family with showy blossoms borne in rigid bracts. They are tender subjects and must be grown in the N. as tub plants.
- nocolai. **STRE-2. Seeds 30c each**  
—regina. **STRE-1. Seeds 25c each**  
Beautiful flowers resembling birds in flight gaily colored deep blue and orange; banana-like foliage and lovely subject for conservatory doing well in large tubs or pots, also outdoors in mild climates.
- STREPTANTHERA**  
—cuprea. **STRT-1. Pkt. 25c**  
Brilliant cape bulb with foliage like Tritonia, flowers brilliant orange-red with violet eye; harder than Freesia.
- STOCKS. See Matthiola.**
- STREPTOCARPUS**  
**(STREP-toh-kahr-pus)**  
Cape Primrose. Choice herbaceous plants akin to Gloxinia and Saintpaulia, usually stemless with showy blue or purple flowers and broad basal leaves; easily grown down in Feb. in a cool greenhouse producing blooming plants the following winter. They are grown as an indoor pot plant.
- achimenesiflorus. **Mixed. STEP-1.**

- Pkt. 35c**  
—orchid flowered. **STEP-2. Pkt. 35c**
- STYRAX (STY-rax)**  
Deciduous and evergreen shrubs and trees native of the warmer regions; they are very attractive in habit and with showy white flowers in clusters or racemes. Do best in light and well drained soil; a few are hardy in the North. They make pretty shrubs and lawn specimens.
- Hookeri. **STAX-1. Pkt. 30c**

**SWEET PEAS**

- We list the top varieties in Sweet Peas and while many fine varieties are offered under many different names, we adhere strictly to the introducer's name; by trials ourselves and many reports from our customers in all sections of the country as well as very extensive trials by our Sweet Pea growers in California, we are able to discard the varieties that have been surpassed by newer introductions and we are positive that, if your varieties are selected from the list we present, you will have the best varieties one could possibly secure.
- A hardy annual climber requiring rich deeply worked soil containing clay but with good drainage; sunny situations are best but not exposed to hot dry winds during the summer. It is better if the soil can be manured and worked in the fall so that the soil will be in good physical condition in the spring; 1 1/2-2 ft. is not too deep to work the soil in the fall. Sow seeds as early as possible, 2 in. apart and 3 in. deep covering with but 1 in. of soil and then gradually filling in the other 2 in. as the plants grow; some sand mixed in the top soil, especially with the white seeded sorts, will help. Thin plants to 3 in. apart. It is important that the support given the vines be rigid at the bottom so that the wind will not be able to tear the roots or disturb them by jerking the supports. Keep flowers picked for best bloom.

- SPENCER VARIETIES:**  
The most popular type for garden use and will produce the prettiest flowers; while all other types have their good points, the Spencers will satisfy most growers. We list a selection of the very best varieties here, each in its color classification, and we feel sure you will have little chance of finding better ones.
- Prices: All Spencer varieties:**  
Pkt. 10c; oz. 30c; 1/4 lb. \$1.10
- Barbara. **SPEA-1. Pkt. 10c**  
A fine salmon.
- Bonny Briar. **SPEA-2. Pkt. 10c**  
Beautiful rose-pink, large flowered.
- Capri. **SPEA-3. Pkt. 10c**  
Beautiful light blue, long stems and a vigorous grower.
- Charming. **SPEA-4. Pkt. 10c**  
Rose cerise.
- Flagship. **SPEA-5. Pkt. 10c**  
Deep navy blue, large sized flowers and perfect form, artistically placed on long strong stems, a Silver Medal winner, Scot. Nat. S.P. Soc.
- Flamingo. **SPEA-6. Pkt. 10c**  
Orange scarlet cerise.
- Flora. **SPEA-7. Pkt. 10c**  
Clear deep lavender.
- Golden Dragon. **SPEA-8. Pkt. 10c**  
Golden bronze, wings orange rose.
- Grand Slam. **SPEA-9. Pkt. 10c**  
Bright scarlet-cerise shaded orange, sun-proof, a showy color of great appeal both for garden display or for cutting.
- Loch Lomond. **SPEA-10. Pkt. 10c**  
The best mahogany.
- Maytime. **SPEA-11. Pkt. 10c**  
Golden cerise.
- Patricia Unwin. **SPEA-12. Pkt. 10c**  
Beautiful golden salmon on cream ground color, beautiful.
- Pinnacle. **SPEA-13. Pkt. 10c**  
Rich deep rose-pink with a touch of white near the base, stems unusually long and strong.
- Crimson scarlet, fine. **SPEA-14. Pkt. 10c**  
Salmon shrimp pink.
- Snow White. **SPEA-16. Pkt. 10c**  
Smiles. **SPEA-15. Pkt. 10c**  
Red Supreme. **SPEA-17. Pkt. 10c**  
Deep crimson.
- Rubicund. **SPEA-14. Pkt. 10c**  
is as near perfect as possible to secure. Solid paper white with no pink tinge; black seeded, flowers as large as Gigantic. 2-3 ft. tall.
- Sunkist. **SPEA-17. Pkt. 10c**  
Cream, picotee, edged rose.
- Sweet Afton. **SPEA-20. Pkt. 10c**  
Silvery pink.
- Welcome. **SPEA-21. Pkt. 10c**  
Dazzling deep scarlet-vermilion; a showy flower.
- Windsor Blue. **SPEA-22. Pkt. 10c**  
Fine clear mid-blue, immense flowers strong stems, the strongest growing clear blue yet introduced.
- Youth. **SPEA-23. Pkt. 10c**  
White, pink picotee.
- Saier's Special Blend. **SPEA-23X. Pkt. 10c; oz. 30c; 1/4 lb. \$1.10**  
This blend is strictly a hand made blend of the above varieties and in correct proportion as to color blend. Where a small planting is made, this is the ideal blend as it contains just enough varieties so that you will have a full color range for cutting. It is also a collection of all the outstanding varieties so far introduced. It is the last word in Spencer Sweet Peas.
- Gold Medal Spencer Blend. **SPEA-24. Pkt. 10c; oz. 25c; 1/4 lb. 95c**  
This is a formula blend which contains over 75 standard varieties and in addition all the best novelties of the past year from one of the large trial plantings; color blend
- Early or Winter Flowering. **SPEA-27. Pkt. 20c; oz. 40c; 1/4 lb. \$1.40**  
Choice Mixed. This type is earlier than the Spencers and has been grown in the southern sections of the country due more to its earliness; it is also grown exclusively in greenhouses for winter flowers, however, it does as well outdoors in the North. This is a well balanced blend of the newest and brightest colors.
- Cupid, Bo-peep. **SPEA-28. Pkt. 10c; oz. 30c; 1/4 lb. \$1.10**  
Low compact plants for bedding or borders, blooming in June until frost, also called Bedding Sweet Peas; color pink.
- Ruffled Spencers, Mixed. **SPEA-25. Pkt. 10c; oz. 30c; 1/4 lb. \$1.10**  
The unusual duplexness and extra frilliness of the flowers gives this type a double appearance; they are very pretty.
- Spring Flowering Mixed. **SPEA-26. Pkt. 15c; oz. 40c; 1/4 lb. \$1.40**  
A remarkable new intermediate season type, exhibiting strong heat resistance in combination with vigorous growth, ex-

remely long stout stems and a heavy crop of flowers over a long season. Adapted both to outdoor and greenhouse growing. It is especially recommended for the mid-sections of the country and in the South where Sweet Peas are grown, and where the heat makes it impossible to grow the

**SWERTIA**

- Related to the Gentians but quaint rather than showy flowers; give the same treatment as Gentians; slow from seed.
- multicaulis. **SWRT-1. Pkt. 50c**  
Perhaps the best with large flowers of clear yellow to blue, 6 inches or less tall.
- speciosa. **SWRT-2. Pkt. 50c**  
—bimaculata. **SWRT-3. Pkt. 50c**

**SYMPLOCOS (SIM-ploh-kos)**

- Sweet-leaf. Deciduous and evergreen shrubs and trees, native to the warmer parts of the earth, few of which are hardy in the North, but most can be grown outdoors in the South.
- theatolia. **SIMP-1. Pkt. 25c**

**TALINUM (tah-LY-num)**

- Flame Flower. Genus of Purslane Family comprising many small fleshy perennials with erect clusters of pink, red or yellow flowers. Some are hardy rock garden subjects, others must be grown indoors in pots.
- paniculatum. **TALI-1. Pkt. 20c**  
Coral Flower. A distinctive and very fine annual garden flower having many slender stems bearing hundreds of little 5-pointed stars of luminous rosy pink followed by airy long hanging capsule-like polished coral heads; fine for cutting and for house plants; sow after soil is warm; a single plant can throw as many as 30 great bright plumes; foliage is decorative, sow in position, 2 1/2 ft.

**TALAUMA (ta-la-YU-ma)**

- Tender evergreen trees of the Magnolia Family, rivaling them in beauty. Hardy in the South only, they will require a warm greenhouse in the North, with the same cultural needs as Magnolia.
- hodgsoni. **TALA-1. Pkt. 50c**  
Cup-shaped flowers with spicy fragrance, purplish blue sepals and white petals, fully six inches across. One of the most beautiful flowering trees, with large leathery leaves, 50 ft.

**TEPHROSIA (tef-ROH-si-ah)**

- Members of the Pea Family with ash-colored foliage and clusters of a few red, purple or white pea-like flowers.
- camdida. **TEPH-1. Pkt. 35c**

**THALICTRUM (thal-LIK-trum)**

- Meadow rue. Perennial plants of the Buttercup Family, some very decorative in the border and others for the wild garden. Foliage is attractively cut; flowers in numerous large clusters, without petals but with large drooping stamens and sometimes showy sepals. They combine well with plants like Peonies and Iris. Easily grown in light, rich, loamy soil; few natives in moist swampy soil.
- adiatifolium. **THAL-1. Pkt. 15c**  
Fine cut foliage, fewer rosy-purple blooming early summer, 2 1/2 ft.
- aulegifolium. **THAL-2. Pkt. 40c**  
One of the most dainty and beautiful of the race with billowy masses of fluffy flowers in white, cream or lilac; for cool moist position in border; sun or light shade, excellent beside pool or stream, dandy cut flower, very hardy, 1 1/2-4 ft., HP.
- diptercarpum. **THAL-2. Pkt. 15c**  
Tall late blooming species with pyramidal clusters of rosy-mauve or purple flowers brightened by drooping golden stamens, 4 ft., Aug-Sept., HP.
- kisanum. **THAL-4. Pkt. 50c**  
—virgatum. **THAL-5. Pkt. 20c**  
Herbaceous plant, pure white flowers 1/2" across, 1 1/2 ft.
- Rose Pink. **THAL-6. Pkt. 20c**

**THERMOPSIS (ther-MOP-sis)**

- Perennial plants of the Pea Family, with a number of lupine-like plants having racemes of yellow flowers. Easily grown in light rich soil, in open sunny position and are useful in the border.
- caroliniana. **THER-1. Pkt. 15c**  
Massive spikes of golden yellow flowers, reminding one of Lupins, 3 ft., June-July, HP.

**THUNBERGIA**

- (thun-BUR-jah)**  
Clock-vine. A genus of some 75 species of tender climbers from tropical regions (Acanthus Family). Several are greenhouse vines, and they can be set outdoors for summer flowering where they do nicely. In the warmer parts of the U.S. they can be grown outdoors. Start seed early indoors.
- fragrans. **THUN-3. Pkt. 50c**  
A slender climber with attractive white flowers, 1 1/2 in. across.
- gibsoni. **THUN-1. Pkt. 25c**  
Bright deep orange climber.
- Choice Mixed. **THUN-2x. Pkt. 20c**

**THYMOPHYLLA**

- tonnibola. **THYM-1. Pkt. 20c**  
Dahlberg Daisy. Pretty everblooming plant grown as an annual and unsurpassed for close edgings, bedding or rock garden filler. Myriads of tiny daisy-glosses in a gold tone, over mounds of aromatic fern-foliage; sow early, 6 in. tall. Also grown as a perennial pot plant.
- serpyllum album. **THYM-2. Pkt. 25c**

**THYMUS (TY-mus)**

- Thyme. Aromatic plants with a profusion of small flowers in summer. All like sunny dry locations and are easily grown from seed which germinate readily; in heavy soils they are liable to winter kill.
- mastechinus. **THYM-1. Pkt. 30c**  
Highly aromatic from the Sierra Nevada.

**TIGRIDIA (TY-grid-ah)**

- Very beautiful bulbous plants with 3-petaled flowers that form a shallow bowl surrounded by 3 triangles; easily grown from seed which occasionally flower the first year, treat like Gladiolus.
- pavonia, Mixed Colors. **TIG-1. Pkt. 30c**  
Best known of the several species, very showy and variable in color; hardy in open from Wash. south; sandy soil, full sun, 2 1/2 ft.



## TITHONIA (ti-THOH-ni-ah)

Natives of Mexico, called Mexican Sunflower and belonging to the Daisy Family. They are robust growers and annuals. Plant out after danger of frost is past.

—**Avalon Hybrids.** TITH-1. Pkt. 15c  
An early strain that blooms by end of June from seed sown in position; color orange-topaz to burnished over-shoot of scarlet flame.

—**speciosa Fireball.** TITH-2. Pkt. 15c  
A brilliant scarlet, 6-9 ft.

—**Orange Vermilion.** TITH-3. Pkt. 15c  
Glistening orange-scarlet flowers like large single Dahlias; for background or cutting, 6-9 feet.

## TORENIA (toh-REE-ni-ah)

Annual and perennial plants of Figwort family bearing 2-lipped flowers resembling small Gloxinias. Native of tropical Asia and Africa, they are treated as annuals in N. or grown in the greenhouse. In Fla. they are used as the Pansy in the N. They thrive in partially shaded places and require regular watering. Set plants out after frosts are past and ground warm.

—**fourniere.** TORE-1. Pkt. 25c  
While they are perennial they are best grown as annuals in the North; used much as Pansies are in the North, doing best in partial shade, along water course or in sandy soils if well watered; flowers rich blue with golden centers, very free, excellent for pots, beds, window boxes, 9-in.

## TRACHELOSPERMUM

(tray-kel-oh-SPUR-mum)  
Star-Jasmine. Genus of S. Asiatic evergreen vines with fragrant white flowers.

—**fragrans.** TRAC-1. Pkt. 40c

## TRICHOSANTHES

—**colubrina.** TRIC-1. Pkt. 15c  
Snake Gourd. Annual climber with white flowers.

## TRICUSPIDARIA

(tri-cus-pi-DAY-ri-ah)  
(Crinodendron). Chilean trees or shrubs for greenhouse culture except in the South flowers are borne singly.

—**lanceolata.** TRIO-1. Pkt. 25c  
Very attractive with drooping scarlet urn-shaped flowers, fairly hardy in a sheltered position.

## TRIPTERIS

—**hyososerioides.** TRIP-1. Pkt. 15c  
Golden yellow flowers with black disk, hardy annual, 2-ft., a pretty and airy So. Af. daisy, easily grown, sow seeds early in the spring.

## TROLLIUS (TROL-i-us)

Globe Flower. Perennial plants with lobed and cut leaves and flowers resembling large double Buttercups and belonging to Buttercup Family. They naturally grow in swampy places but can be grown in reasonably good garden soil that is not too dry, May-July.

—**acaulis.** TROL-2. Pkt. 40c  
A very rare but quite easy species for the rock garden, happy in rather heavy soil with plenty of moisture, in full sun. They have 2 inch buttercups of brilliant golden yellow in late spring and borne singly on short stems above a tuft of deeply slashed leaves. Seed is much easier to germinate than that of most Globeflowers, but should be soaked in warm water for 24 hours before sowing HP, 6 inches.

—**albiflorus.** TROL-1. Pkt. 25c  
Creamy white flowers, 4-20-in. tall, flowering May-June. A western species from Montana.

## TULBAGHIA

—**violacea.** TULB-1. Pkt. 25c  
Beautiful umbels of clear mauve flowers on 24" stems, in S. nearly always in bloom.

## TULIPA (TEW-li-pah)

There are great many wild species of Tulips that are greatly admired by fanciers, especially for the rock garden and some of these have been used in breeding the newer strains of border varieties. Many of the species are rather small in both plant and flower but some have the largest and most brilliant blooms of the entire genus, with some having several flowers to the stem. Seed requires several weeks to germinate and should be sown early in pots or carefully prepared seed beds, several years are generally required for the bulbs to reach blooming size but in this way a collection of rare and expensive kinds can be acquired at little expense.

—**biflora.** TULP-2. Pkt. 50c  
A small early species for R. G. each stem bearing 3-4 small star-like flowers in white or yellow; easily grown from seed, 5 in., HB.

—**chrysantha.** TULP-4. Pkt. 50c

—**sprengeri.** TULP-3. Pkt. 50c  
Bright red flowers, funnel-shaped in bud, easily grown and the last Tulip in flower.

—**stellata.** TULP-1. Pkt. 50c  
Narrow buds open to widely expanded flowers, the outer segments flushed with carmine, the inner white, blotched yellow at base; close to lovely T. clusiana, and quite rare. Likes light sandy soil in sun and fine for rock garden or border, HBb, 6-16 inches.

—**uniflora.** TULP-5. Pkt. 50c  
A small early species for R. G. each stem bearing 3-4 small star-like flowers in white or yellow; easily grown from seed, 5 in., HB.

—**chrysantha.** TULP-4. Pkt. 50c

—**sprengeri.** TULP-3. Pkt. 50c  
Bright red flowers, funnel-shaped in bud, easily grown and the last Tulip in flower.

—**stellata.** TULP-1. Pkt. 50c  
Narrow buds open to widely expanded flowers, the outer segments flushed with carmine, the inner white, blotched yellow at base; close to lovely T. clusiana, and quite rare. Likes light sandy soil in sun and fine for rock garden or border, HBb, 6-16 inches.

## UNIOLA (eu-NY-oh-lah)

Spike Grass. Native perennial grasses. Some species are grown as ornamental grasses.

—**latifolia.** UNIO-1. Pkt. 15c  
Perennial, 5-ft., pretty in the border.

## URSINIA (ur-SIN-i-ah)

Mostly hardy annuals having daisy-like flowers in orange shades on long wiry stems standing 2-3 ft. above low tufts of finely cut foliage; plants bloom profusely in mid-summer to late fall making a colorful addition to the sunny border; they can be potted up for winter bloom indoors.

—**anethoides.** USIN-1. Pkt. 15c  
Jewels-of-the-Veldt, orange flowers with deep purple centers, 1-2 ft.

—**Hybrids.** USIN-2. Pkt. 15c  
Pretty yellow and orange shades.

## VACCINIUM (vak-SIN-i-um)

Deciduous shrubs and trees native of the colder parts even to the Arctic Circle;

it included plants known as Blueberry, Cranberry, Cowberry, Wortleberry, etc. Some are grown for their ornamental foliage and others for their fruits. They are easily grown from seed and require a lime free soil, thriving best in a sandy, moist peat soil.

—**donicum.** VACC-1. Pkt. 25c

## VALERIANA

(vah-lee-ri-AY-nah)  
Hardy plants with small white or rose flowers in spikes or flat-topped clusters; easily grown and valuable for garden effect or for cut flowers. Known as Garden Heliotrope on account of its fragrance; they are excellent hardy border plants.

—**rubra, Mixed.** VAL-1. Pkt. 15c  
Perennial alpine species in White, rose and dark red.

## VANDA (VAN-dah)

Beautiful tropical epiphytic orchids, having racemes of fragrant white, lilac, blue or greenish flowers, usually with sacs or spurs; they require a high temperature and humid atmosphere during the growing period, during the winter a drier and cooler place and exposed to the sun. See Orchids.

—**caerulea.** VAND-1. Pkt. \$1.00  
Blue Orchid. Light blue flowers, 4 inches across in erect racemes, 18 inches tall, from the Himalayas.

## VELTHEIMIA (velt-HY-mi-ah)

Bulbous plants of Lily Family with sword-like foliage in basal rosettes and tubular drooping flowers in dense terminal clusters; easy culture, in greenhouse in N. or outdoors in S. Rich fibrous soil with charcoal and sand best for growing the bulb.

—**viridifolia.** VELT-1. Pkt. 25c  
Well adapted for pot culture; 40-60 reddish tubular flowers 1 1/2" long; ideal rock garden plant in mild sections.

## VENDIDIUM (ve-NID-i-um)

Hardy annuals and perennials allied to the Arctotis; their brilliant orange or yellow flowers suggest small sunflowers; they are valuable in the garden or greenhouse as a color accent and are valuable cut flowers. Generally grown as annuals by starting the seed indoors; space a foot apart, in sunshine and well drained soil.

—**calendulaceum.** VNID-1. Pkt. 10c  
2-in. single golden yellow flowers with black centers, hardy annual, 10-in.

—**fastuosum, Golden Orange.** VNID-2. Pkt. 20c  
Beautiful golden orange flowers with dark centers 4-in. across, silky gray foliage, 2-ft.

—**Hybrids.** VNID-3. Pkt. 20c  
Double rowed Daisies with 3-4-in. flowers in pastel colors of cream, primrose, buff, lemon, orange, usually with irregular zoning of brown, blue or black, 2-ft.

## VERBASCUM (ver-BAS-kum)

Thrive in full sunshine and hybridize readily with the genus Celsia, producing many new color forms. As a rule they make good specimen plants in the background of the hardy border.

—**phoeniceum Hybrids.** VEBS-1. Pkt. 15c  
Grows 5-ft. flowers with prominent purple stamens. The hybrids are beautiful and come in a varied combination. Perennial.

## VERBENA

Perennial in the South but grown as hardy annuals in the North, sowing seeds indoors and transplanting outdoors in May, 1-ft. apart, or seeds can be sown direct in April or May, blooming in mid-summer. Colors pink, rose, red, lavender, blue, purple and white, thriving in poor soil and withstanding drought well.

—**Dark blue.** VERB-13. Pkt. 20c  
Another Heinemann introduction, dark blue with white eye, the blue being a select shade for Verbenas.

—**Gigantea Mixed.** VERB-1. Pkt. 15c; 1/4 oz. 90c  
This strain should not be confused with the ordinary Verbenas; both the trusses and flowers are much larger and the plants decidedly more vigorous. Most of the varieties in this strain produce more compact masses of up-standing flowers over the entire plant than any other strain.

—**Geranium-pink.** VERB-14. Pkt. 20c  
A new strain from the German grower, Heinemann, a beautiful geranium-pink with white eye.

—**Hybrids gr. fl.** VERB-2. Pkt. 15c; 1/4 oz. 60c  
Mammoth, Choice Mixed. Robust spreading growth, plants often 2-ft. across, flowers 1-in. across, quick to come into flower.

—**gr. fl. Beauty of Oxford.** VERB-3. Pkt. 15c; 1/4 oz. 75c  
Hybrids, a beautiful giant strain in shades of rose-pink to rose-red, brightest, produced from plants with the florets 1-in. across.

—**Verbena Blend.** VERB-4X. Pkt. 15c; 1/2 oz. \$1.00  
A blend of all the giant flowered annual Verbenas, including those above.

## HORTENSIS (Garden Verbenas)

—**Dark blue.** VERB-13. Pkt. 20c  
Another Heinemann introduction, dark blue with white eye, the blue being a select shade for Verbenas.

—**Gigantea Mixed.** VERB-1. Pkt. 15c; 1/4 oz. 90c  
This strain should not be confused with the ordinary Verbenas; both the trusses and flowers are much larger and the plants decidedly more vigorous. Most of the varieties in this strain produce more compact masses of up-standing flowers over the entire plant than any other strain.

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A blend of all the giant flowered annual Verbenas, including those above.

## VARIOUS SPECIES:

—**abyssinica.** VERB-12. Pkt. 50c

—**aubletia compacta.** VERB-5. Pkt. 15c  
A new variety, dark violet-red, 10-in. high, blooming end of June till frost, hardy annual.

—**purpuracina.** VERB-6. Pkt. 15c  
Large flowered, 35-in. tall, blooming end of May till frost, dark carmine.

—**bipinnatifida.** VERB-7. Pkt. 15c  
Blooms June till Nov. continuously in showy blue-lavender clusters; ferny, feathery foliage, usually winter hardy perennial but so quick it may be treated as an annual.

—**bonariensis.** VERB-8. Pkt. 15c  
3-ft. high, a new Swiss type, fine for cut flowers, highly recommended.

—**Tobaty Variety.** VERB-9. Pkt. 20c  
By far the best and showiest strains of this species, coming from the Arroya Tobaty of Paraguay; compared with the usual strains of this species, it is more floriferous, the trusses heavier, more massive and compact; blooming season covers several months, color soft bluish-lavender; spectacular in the border, 3-ft.

—**mareisi, alba.** WAHL-1. Pkt. 20c  
—**erinoides type.** VERB-10. Pkt. 15c  
Heat resisting plant spreading into a fine carpet, violet flowers.

—**Venosa.** VERB-11. Pkt. 15c  
Compact purple clusters, 10-in. tall, perennial grown as an annual.

## VERBESINA

—**encelioides.** VEVE-1. Pkt. 20c  
40-in. Butter Daisy. A showy and easy annual, quick from seed, that doesn't seem to know when to stop blooming. Big butter-yellow daisies with wide jagged petals and tufted cushion centers, yellow also. It cuts.

## VERONICA (ve-ROH-i-kah)

Annuals and perennials highly useful in the border and rock garden; hardy, free flowering, thrive in an open sunny position or light shade, easily grown from seeds.

—**altissima.** VERO-3. Pkt. 25c

—**armena.** VERO-4. Pkt. 25c

—**fruticans (saxitilis).** VERO-5. Pkt. 25c

—**saturioidea.** VERO-6. Pkt. 25c

—**spicata enziand.** VERO-2. Pkt. 15c  
Blue or pink flowers in spike-like racemes, 1 1/2-ft., perennial.

## VIBURNUM (vy-BUR-num)

Deciduous and evergreen shrubs and trees widely distributed in the northern hemisphere; they are among the most ornamental and useful shrubs and make good shrubby plants in the shrub border. Their foliage is especially beautiful in the fall; flowers are showy and followed by attractive fruits. Sow seeds when ripe or stratify them when received.

—**coriaceum.** VIR-2. Pkt. 25c

—**erubescens.** VIR-1. Pkt. 25c

—**nervosum.** VIR-4. Pkt. 25c

—**species.** VIR-5. Pkt. 15c

—**stellulatum.** VIR-3. Pkt. 25c

## VINCA ROSEA (VIN-kah)

Madagascar Periwinkle is a tender perennial grown in the North as an annual. It is a good garden subsect with rosy-purple flowers and used in parks as a bedding plant with good effect; sow seeds early in a warm greenhouse and try to transplant several times before setting out. Sun or partial shade.

—**Pure White.** VINC-2. Pkt. 10c

—**Crimson.** VINC-3. Pkt. 10c

—**Mixed.** VINC-4X. Pkt. 10c

## VIOLA

The genus includes a number of species of small, mostly perennial, plants having attractive blue, white, lavender or yellow spurred flowers and used in parks as a bedding plant with good effect; sow seeds early in a warm greenhouse and try to transplant several times before setting out. Sun or partial shade.

—**Pure White.** VINC-2. Pkt. 10c

—**Crimson.** VINC-3. Pkt. 10c

—**Mixed.** VINC-4X. Pkt. 10c

—**Scotch Hybrids.** VIOL-8. Pkt. 25c  
Extra choice bedding Violas that are highly recommended.

—**S. & G. Special Blend.** VIOL-10. Pkt. 25c  
This is the best blend of Violas grown by one of our Netherlands growers and of which they highly recommend.

—**W-F Special Blend.** VIOL-11. Pkt. 35c  
This blend of bright gay colors far surpasses any mixtures of Violas we have ever seen. The bright shades of self colors of red, yellow, blue and apricot combined with many shades which are blotched make these a supreme mixture.

—**adunca.** VIOL-15. Pkt. 25c

—**bellidifolia.** VIOL-16. Pkt. 50c

—**douglasii.** VIOL-14. Pkt. 50c  
Pretty rock garden Viola with yellow flowers and purple reverse; gritty loams, sun, 4" tall, HP.

—**glabella.** VIOL-17. Pkt. 25c

—**saxatilis.** VIOL-12. Pkt. 25c  
Downside Strain, Johnny-Jump-Ups. Color selections of Viola saxatilis. Little "pansy" flowers in extraordinary profusion from late spring to late autumn. Range of color variation exceedingly wide, not easy to find two plants with flowers alike. This strain seems to withstand summer heat rather better than do Johnny-Jump-Ups strains selected from Viola tricolor. Best treated as Annual.

—**hallii.** VIOL-18. Pkt. 50c

—**praemorsa.** VIOL-19. Pkt. 50c

—**sarmentosa (V. sempervirens).** VIOL-20. Pkt. 50c

—**Blend of all Violas.** VIOL-13X. Pkt. 20c  
This is made-up of all the above and other varieties.

—**Scotch Hybrids.** VIOL-8. Pkt. 25c  
Extra choice bedding Violas that are highly recommended.

—**S. & G. Special Blend.** VIOL-10. Pkt. 25c  
This is the best blend of Violas grown by one of our Netherlands growers and of which they highly recommend.

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—**adunca.** VIOL-15. Pkt. 25c

—**bellidifolia.** VIOL-16. Pkt. 50c

—**douglasii.** VIOL-14. Pkt. 50c  
Pretty rock garden Viola with yellow flowers and purple reverse; gritty loams, sun, 4" tall, HP.

—**glabella.** VIOL-17. Pkt. 25c

—**saxatilis.** VIOL-12. Pkt. 25c  
Downside Strain, Johnny-Jump-Ups. Color selections of Viola saxatilis. Little "pansy" flowers in extraordinary profusion from late spring to late autumn. Range of color variation exceedingly wide, not easy to find two plants with flowers alike. This strain seems to withstand summer heat rather better than do Johnny-Jump-Ups strains selected from Viola tricolor. Best treated as Annual.

—**hallii.** VIOL-18. Pkt. 50c

—**praemorsa.** VIOL-19. Pkt. 50c

—**sarmentosa (V. sempervirens).** VIOL-20. Pkt. 50c

—**Blend of all Violas.** VIOL-13X. Pkt. 20c  
This is made-up of all the above and other varieties.

—**adunca.** VIOL-15. Pkt. 25c

—**bellidifolia.** VIOL-16. Pkt. 50c

—**douglasii.** VIOL-14. Pkt. 50c  
Pretty rock garden Viola with yellow flowers and purple reverse; gritty loams, sun, 4" tall, HP.

—**glabella.** VIOL-17. Pkt. 25c

—**saxatilis.** VIOL-12. Pkt. 25c  
Downside Strain, Johnny-Jump-Ups. Color selections of Viola saxatilis. Little "pansy" flowers in extraordinary profusion from late spring to late autumn. Range of color variation exceedingly wide, not easy to find two plants with flowers alike. This strain seems to withstand summer heat rather better than do Johnny-Jump-Ups strains selected from Viola tricolor. Best treated as Annual.

—**hallii.** VIOL-18. Pkt. 50c

—**praemorsa.** VIOL-19. Pkt. 50c

—**sarmentosa (V. sempervirens).** VIOL-20. Pkt. 50c

—**Blend of all Violas.** VIOL-13X. Pkt. 20c  
This is made-up of all the above and other varieties.

## VIRGINIA STOCKS. See Malcomia.

## VISCARIA (vis-CAR-i-ah)

Start indoors in March or April, germinating them warm and in light.

—**nama compacta, Fiery Red.** VISC-9. Pkt. 10c

—**nobilis.** VISC-9. Pkt. 20c

—**oculata, Loyalty.** VISC-6. Pkt. 10c  
Graceful plants 1-ft. high bearing during the summer large showy brilliant flowers each with a dark center.

—**Rose Beauty.** VISC-7. Pkt. 10c

—**Best Mixed.** VISC-8. Pkt. 10c

## WAHLENBERGIA

(wahl-en-BUR-j-ah)  
A genus of small annual and perennial plants of Bellflower Family with nodding bell-shaped blue flowers. They resemble Bellflowers and are fine for rock gardens especially in open and well drained positions. Grow as you would Campanulas.

—**Very pretty biennial, with Blue-bell flowers, blooming July-Aug. Germinate cold and in light.**

—**grandiflora.** WAHL-2. Pkt. 20c  
Usually known as Platycodon grandiflorum, the balloon flower; inflated balloon-like buds and blue or white saucer-shaped flowers, 1 1/2 ft., HP.

—**Very pretty biennial, with Blue-bell flowers, blooming July-Aug. Germinate cold and in light.**

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## WALLFLOWER

Cheiranthus (kay-RAN-thus) Cheiri. A genus of perennials some of which rank among the showiest of the garden perennials. Under this classification are the English wallflowers. Seed should be sown in the eastern part of the country, early in the summer and the seedlings transplanted a couple of times, pinching the tops back to induce bushy growth; the young plants can then be wintered over in cold frames and set out for flowering the next spring; light loamy soil having some lime seems to be best. In mild climates they can be wintered over in the open ground and in the West the annual sorts can be easily grown.

—**C. cheiri.**

Most of the Wallflowers offered here are English grown and from the very best source; they are all high class.

—**Blood Red.** WALL-6. Pkt. 25c  
Single variety, highly selected stock, fine color, HP, 1 1/2 ft.

—**Cloth of Gold.** WALL-7. Pkt. 25c  
Popular large flowered, rich yellow variety, HP, 1 1/2 ft.

—**Early Wonder.** WALL-2. Pkt. 15c  
New class of double Wallflower, golden yellow, flaked with green, HP, 2 ft.

—**Eastern Queen.** WALL-8. Pkt. 25c  
Pretty shade of salmon-red, effective bedder, HP, 1 1/2 ft.

—**Ellen Willmott.** WALL-9. Pkt. 25c  
Ruby-red, unique and attractive color, HP, 1 1/2 ft.

—**Feltham Early.** WALL-10. Pkt. 25c  
NEW. Fine red-brown color, very early, HP, 1 1/2 ft.

—**Fireball.** WALL-3. Pkt. 15c  
This is a new Swiss variety of fiery red color that is exceptionally good. Perennial.

—**Fire King.** WALL-11. Pkt. 25c  
Rich orange-red, remarkably fine and effective, HP, 1 1/2 ft.

—**Goliath.** WALL-4. Pkt. 20c  
The beauty of this variety cannot be excelled even by the double strains.

—**Golden Monarch.** WALL-12. Pkt. 25c  
A rich yellow counterpart of our Vulcan, HP, 1 ft.

—**Ivory White.** WALL-13. Pkt. 25c  
Handsome novelty, HP, 9 inches. Nearest approach to white, a useful contrast, HP, 1 1/2 ft.

—**Orange Bedder.** WALL-14. Pkt. 25c  
Rich orange shading to apricot-yellow, a striking color, HP, 1 ft.

—**Primrose Monarch.** WALL-15. Pkt. 25c  
Counterpart to our Golden Monarch, a beautiful primrose color, HP, 1 ft.

—**Ruby Gem.** WALL-16. Pkt. 25c  
Very large and fine ruby-violet, HP, 1 1/2 ft.

—**Vulcan Improved.** WALL-17. Pkt. 25c  
Rich velvety, crimson flowers, a great improvement, HP, 1 ft.

—**Forcing Annuals Mixed.** WALL-1. Pkt. 10c; oz. 70c  
This is an early annual, suitable for forcing, in best color blend, 18-inches.

—**Fireball.** WALL-3. Pkt. 15c  
This is a new Swiss variety of fiery red color that is exceptionally good. Perennial.

—**Fire King.** WALL-11. Pkt. 25c  
Rich orange-red, remarkably fine and effective, HP, 1 1/2 ft.

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Rich velvety, crimson flowers, a great improvement, HP, 1 ft.

—**Forcing Annuals Mixed.** WALL-1. Pkt. 10c; oz. 70c  
This is an early annual, suitable for forcing, in best color blend, 18-inches.

## WATSONIA (wat-SOH-ni-ah)

Related to Gladiolus, Watsonias make dense clumps of long grassy leaves with a profusion of tall stems bearing numerous somewhat trumpet-shaped flowers; much grown in California but little known in the N. In the N. try growing them in pots or boxes that can be taken indoors in a fairly sunny basement during the winter, as they cannot be handled like dry Gladiolus bulbs; they should be tried south of Wash. in the S.

—**Van Stavern's Strain.** WAT-1. Pkt. 35c  
Many colors; like graceful Gladiolus, evergreen foliage, for mild climates, 5 ft.

—**beatrice.** WAT-2. Pkt. 25c  
Evergreen, require sunny situations and thorough watering; beautiful along streams and pools, bloom late summer and fall. Stems 4 ft. tall, flowers in all shades of pink, salmon, apricot, orange, red and even ashes of roses, long lasting when cut.

—**Evergreen Mixture.** WAT-3. Pkt. 25c  
Over 12 evergreen species in a wide color range.

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Many colors; like graceful Gladiolus, evergreen foliage, for mild climates, 5 ft.

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Over 12 evergreen species in a wide color range.

## XANTHISMA (zan-THIZ-mah)

A genus of annual and biennial plants with narrow leaves and yellow ray flowers in heads. Suitable for dry open places and seed should be sown where plants are to grow.

—**lexanum.** XANT-1. Pkt. 20c  
"Star of Texas". Annual making the most brilliant showing of vivid sun reflecting golden yellow of any annual flower, no exceptions; continuous bloom from late June till end of Oct; flowers are big, many pointed stars of polished gold, cuts well and withstands heat and drought well, 2-ft.

## XERANTHEMUM

(zee-RAN-thee-mum)  
—**annum, Double Mixed.** XERN-1. Pkt. 10c; oz. 80c  
Easily grown everlastings with white downy foliage and pink, purple and white flowers, 1 1/2-in. across; they are grown mainly for their papery flowers for drying; best to sow in rows in the garden when weather becomes warm, thinning them out later to 6-in. or so apart, 3-ft. tall.

## ZANTEDESCHIA

Calla Lily. Sometimes listed as Richardia. Easily grown, requiring light soil with plenty of humus; make excellent pot plants and useful for forcing; in Calif. can be left in ground or winter but in the N. they must be lifted and stored indoors.

—**aethiopica.** ZANT-2. Pkt. 25c  
Ivory Calla Lily. Large white flowers on 3-4 ft. stems, beautiful dark green foliage, practically evergreen in Calif., plant in moist shady places.

—**godfreyi.** ZANT-1. Pkt. 25c

## ZEPHYRANTHES

(zef-i-RAN-theez)  
Zephyr-lily. Belonging to Amaryllis Family, narrow strap-shaped leaves, and funnel-shaped flowers on erect stems. The Rain-lily belongs to this.

should be planted more. They are beautiful and useful; there are



## HERBS — GARDEN AND MEDICINAL

then cooked as a vegetable but the stalks which resemble anise-flavored celery, can be eaten raw. Make plantings every two weeks, growth rapid. Pkt. 15c; Oz. 50c.

**GERMAN CHAMOMILE (KOM-oh-my)**  
(Matricaria chamilla.) Scented foliage and typical daisy-like flowers. Pkt. 20c; Oz. 95c.

**HOARHOUND**  
(Marrubium vulgare.) An aromatic perennial with woolly white foliage and whitish flowers; used mainly in flavoring candies; plant thrives in dry soil. Pkt. 20c.

**HYSSOP (HIS-up)**  
(Hyssopus officinalis.) Hardy perennial herb or sub-shrub grown as a culinary and medicinal herb and as an ornamental; grown from seed sown early in spring or late fall, transplant in early summer to 12-15" apart, limy soils best. Pkt. 15c; Oz. 50c.

**LAVENDER, TRUE**  
(Lavandula spica.) Not real hardy in N. and must be protected with a good mulch of straw; they develop their best fragrance when grown in a dry, light, limy, friable soil in full sun, the soil not too rich. Grown for an ornamental as well as for its leaves which are dried, giving off its rich fragrance for which it is valued. Start early in spring indoors or try planting it outdoors in Nov. Pkt. 25c; 3 for 55c.

**PENNYROYAL**  
(Mentha pulegium.) Prostrate growth, small bluish-lavender flowers, grown in herb garden, the leaves being used for their flavor. Easily grown from seed in any good garden soil, a little moist and in full sun. Pkt. 25c.

**ROCKET-SALAD**  
(Eruca sativa.) Rocket. Used as greens. Pkt. 15c; Oz. 40c.

**ROSEMARY**  
(Rosmarinus officinalis.) A hardy shrubby plant grown chiefly for its aromatic leaves used in seasoning as well as an oil used in medicines. Grows 6 ft. and lasts for years with a little winter protection; prefers dry, well drained soils. Pkt. 25c; Oz. \$1.80.

**RUE**  
(Ruta graveolens.) Perennial shrubby plant to 3 ft. with yellowish flowers; has medicinal properties as well as ornamental. Pkt. 25c.

**SWEET BASIL**  
(Ocimum basilicum.) Easily grown tender annual, 1 ft. Leaves delightfully clove-scented and used either green or dried in seasoning soups, salads, cottage cheese, chopped meats or sausages. Plant 6-10" apart, thrives in light warm soils. Cut in bundles to dry. Plants can be potted for winter growing. Pkt. 10c; Oz. 45c.

**SAGE**  
(Salvia officinalis.) Hardy perennial, easily grown; plant early in spring or in Nov. The leaves are dried and used as seasoning in meats, sausages, stuffings and cheeses. Space 2 1/2 ft. Pkt. 15c; Oz. 80c.

**SCURVEY GRASS**  
(Cochlearia officinalis.) A small herb of Mustard Family grown for its medicinal properties also as a salad; prefers cool and partially shaded soil. Pkt. 15c.

**SUMMER SAVORY**  
(Satureja hortensis.) Hardy annual and very useful culinary herb, the aromatic leaves being used, either green or dried, for flavoring salads, sauces, stuffings, soups and stews. Start seed in pans on account of their small size, transplanting as soon as large enough, spacing 15" apart, thriving in good garden soil and full sun. It is very famous for its flavor in green string beans and should be grown in all beans sections. Pkt. 15c; Oz. 40c.

**SWEET MARJORAM**  
(Origanum marjorana.) Perennial best grown as an annual in the N.; leaves used green in summer and dried for winter, excellent for salads when green and for seasoning soups, meats, poultry and cheese when dried. Seeds are small and best started in seed pan and transplanted out, 12-15" apart. For drying gather leaves just before they flower. Pkt. 20c; Oz. 85c.

—Golden Gem. ZIN-28. Pkt. 15c; oz. \$1.00  
Beautiful golden orange color.  
—Golden Orange. ZIN-29. Pkt. 15c; oz. \$1.00  
—Scarlet Gem. ZIN-30. Pkt. 15c; oz. \$1.00  
—Salmon Rose. ZIN-38. Pkt. 15c  
—Valencia. ZIN-31. Pkt. 15c; oz. \$1.00  
Burnt orange.  
—Pastel Shades. ZIN-32. Pkt. 15c; oz. \$1.00  
—Tom Thumb. ZIN-33. Pkt. 15c  
Plants 6-8 in. tall, compact, covered with well formed flowers of the Lilliput Type. Color range thru red, orange, yellow, pink, rose and other pastel shades. Excellent for pot plants and border use.

### New Species

### South Rhodesian

(Continued on Page 22)

The following is part of a list of African seeds expected soon or during the winter months. This list was phoned to the printer and mistakes may occur in the spelling of some names.

Packets are 50c each.

BARLERIA lupulina  
BEUHINIA acuminata  
—cardicans  
—punctata  
—metalandra  
—purpurea  
BRUNSELSIA americana  
—eximia  
—latifolia  
DAUHINIA priandra  
BRACHYCOME retusa  
BRACHYCHITON diversifolia

**TANSY French**  
(Tanacetum vulgare.) Common Tansy. Perennial to 3 ft., grown in the garden for ornament, in herb garden for its medicinal properties and flavoring, easily grown. Pkt. 15c; Oz. 80c.

**TARRAGON**  
(Artemisia dracunculus.) Perennial herb used as a seasoning, especially in vinegars. This is the Russian Tarragon and not be confused with the French Tarragon, which is reproduced only from the roots. Pkt. 20c.

**THYME**  
(Thymus vulgaris.) Hardy perennial, growing to 8" tall with lavender flowers, grown both for ornament in border or rock garden and for its flavor, the fresh tops being used in garnishing and the leaves, either dried or fresh, chopped and used in a wide variety of cooked foods. Easily grown in ordinary garden soil, spacing 10-12" apart.

**WORMWOOD**  
(Artemisia vulgaris.) Mugwort or Mother Wort. Tall plant with stems often purple and leaves fragrant, green above and white beneath, flower heads yellow in spikes. Plants are aromatic, the tops and leaves being the parts dried, perennial. Pkt. 20c.

### FALL PLANTING OF HERBS

There are many kinds of herbs, usually started in the spring, which will do even better if the seed is sown in Nov. in the North, late enough so that they do not germinate till the coming spring. Many of the hard coated kinds, those of the Mint Family do best this way, also Salad Burnet. Others, such as Angelica, Chervil, Sweet Cicely, Parsley, Lavender, also can be fall sown.

Kinds that need transplanting anyway, should be sown in rows, well marked. Included in this list are: Anise-Hyssop, Lemon Balm, Wild Bergamot, Salad Burnet, Catnip, Hyssop, Lavender, Mountain Mint, Wild Marjoram, Rue, Clary Sage and Thyme.

Also Angelica, Borage, Caraway, Chervil, Coriander, Dill, Lovage and Shirret can be sown in rows where they are to remain.

### NOTICE:

Many herbs will not be delivered to us till late in the fall or early winter and unless we can fill from 1947 crop seed, some sorts may have to be held till new crop arrives.

**ANGELICA (an-JEL-i-kah)**  
(Angelica archangelica.) A stout herb to 6 ft. growing on low ground and makes a striking picture by side of stream, perennial. Pkt. 20c; Oz. 60c.

**ANISE (AN-is)**  
(Pimpinella anisum.) Parsley Family, the leaves and seeds used for flavoring in cookery and also in medicine. Annual to 2 ft. and easily grown. Sow seed in April in rows where plants are to grow. Pkt. 20c; Oz. 60c.

**BALM, LEMON**  
(Melissa officinalis.) An aromatic sweet herb of Mint Family, used in seasoning, in liquors and medicine; grows 2 ft. tall, leaves have a decided lemon odor and flavor. Easily grown from seed sown late in fall or early in spring. Pkt. 20c; Oz. \$1.00.

**BORAGE (BUR-ah)**  
(Borago officinalis.) Attractive plant, 18" tall, with pretty sky-blue flowers in clusters, likes by bees. Upper leaves and flowers used in salads, the lower leaves are cooked like spinach; the fresh foliage has a cucumber flavor and adds a cooling touch to salads. Space plants 2-3 ft. apart, hardy annual. Pkt. 10c; Oz. 50c.

**CARAWAY (KAR-ah-way)**  
(Carum carvi.) An annual or biennial whose seeds are used to flavor bread, cakes, confections and cheese; easily grown from early spring sown seeds, where plants are to stand, for two seasons. The young shoots and leaves may be used to flavor salads. Sow few radish seed to mark your row. Pkt. 15c; Oz. 35c.

**CARDOON (kah-DOON) Smooth Spanish**  
(Cynara cardunculus.) Grown for its branched stalks and thick main root, sow seeds early where plants are to grow, in hills 18-24" apart. Water during dry periods to keep foliage tender, in fall treat

—Elegans pumila. ZIN-34. Pkt. 15c; oz. \$1.10  
Double Sunshine Tints. The Cut and Come Again type, in the best pasted shades. Sunshine Tints are richer in color and more full bodied than ordinary types, and include many autumn tints of bronze, golden yellow, apricot and rich rose as well as the regular delicate pinks, creamy yellows, soft flesh tones and salmon. Free flowering, blooms 2 1/2-3 inches across, rounded in shape and on stems of good cutting length. For best results sow seed where they are to grow in moderately enriched sandy loam. Flowers in 50 days continuing thruout the summer.  
—linaris. ZIN-35. Pkt. 15c  
ORANGE, dwarf, compact, early flowering single; orange, light yellow stripe, dark center; pretty for edging, etc., 1-ft.  
—Haegeana. ZIN-36. Pkt. 15c

—pulcherrima  
—flava  
ERYTHROCEPHALUM zambesianum  
SUTERA burkeana  
—floribunda  
—grandiflora  
—phlogiflora  
PYCOMOSPACHYS urpicaefolia  
VERONIA glabra  
—melleri  
—karomgensis  
CONVOLVULUS randii  
ACACIA decurrens  
—sarnesiana  
—longifolia  
—pubescens  
GLADIOLUS African species  
PEPHROSIA pubescens  
SHRUBS  
ASTROCHLAENA malvacea  
CLERODENDRON mycroives  
DYSCHORISFE thunbergifolia  
PLUMBAGO zeyheri  
HERBACEOUS PLANTS:

like Celery and later they will be ready to eat like Celery or Endive. Pkt. 15c; Oz. 90c.

**CELERY, SOUP**  
Plain leaf type best suited for use in flavoring soups, either in green state or dried. Pkt. 10c; Oz. 35c.

**CHEVIL (CHUR-vil)**  
(Anthriscus cerefolium.) Plain leaf Chervil, of Parsley Family, whose parsley-like leaves are used for flavoring salads. Grows 18-24". Sow seeds in early spring or late fall, in any good garden soil, some shade best and produces leaves for use in 6-10 weeks. Pkt. 10c; Oz. 40c.

**CHEVIL (CHUR-vil)**  
(Anthriscus cerefolium.) Curled leaf Chervil. Similar to the plain leaf Chervil, except the curled leaves can be used more for garnishing, similar to curled Parsley. Pkt. 10c; Oz. 40c.

**CHIVES (Chyvs)**  
(Allium schoenoprasum.) Perennial developing a thick grass-like tuft and valued for their mild onion-like flavor, the green stems being used in salads, soups, etc. The oftener the leaves are cut the stronger the plant will grow. Sow seeds early in drills in rows 2-3 ft. apart. Pkt. 15c; Oz. 90c.

**CORIANDER (koh-ri-AN-dur)**  
(Coriandrum sativum.) Annual or biennial herb of Parsley Family grown for its aromatic seeds used in flavoring liquors and confections; plants grow 2 ft., plant in rows 1 1/2 ft. apart, sow seeds in early spring or late fall; the seed heads, which ripen in mid-summer, are dried on canvas and when dry the seeds can be thrashed out. Pkt. 10c; Oz. 49c.

**CORN SALAD**  
(Valerianella locusta, var. olerioria.) Dutch Broad Leaf, Large Seeded. Also known as Feticus, Veticost and Lambs-lettuce. Grown in early spring or late fall as a pot-herb or salad; seed sown in early fall, some plants will get large enough for fall use and the balance with mulching can be carried over for early spring plants. Sow in early spring in rows 12 inches apart; they do not do well during the hot summer. The leaves are mixed with mustard, pepper grass or water cress, as a salad. Pkt. 15c; Oz. 60c.

**CRESS**  
(Lepidium sativum.) Pepper Grass. Plain Leaved. Annual growing quickly and making the best greens for garnishing and for salads; the richer the soil the better, plant in rows 12" apart in earliest spring and at weekly intervals till middle of May. Pkt. 10c; Oz. 25c; 1/4 lb. 35c.  
—Curled or Double Leaved. Makes nicer leaves for garnishing as well as for salads. Pkt. 10c; Oz. 20c; 1/4 lb. 35c.  
—Large Leaf French. A large leaf strain. Pkt. 15c; Oz. 25c; 1/4 lb. 40c.

**CRESS, TRUE WATER**  
(Nasturtium officinalis.) Low trailing perennial growing in wet ground and springs, easily grown from seed and best for greens in early spring or fall. Pkt. 20c; Oz. 90c.

**CUMIN (KUM-in)**  
(Cuminum cyminum.) A small annual of the Parsley Family, easily grown from seeds; has finely cut leaves and clusters of small white or rose flowers, the seeds of which are used as an ingredient in curry powder and for flavoring pickles and soups. Pkt. 15c; Oz. 60c.

**DILL**  
(Anethrum graveolens.) Of Parsley Family, grown for its seeds which are used in flavoring of dill pickles. Sow early in spring or late in fall, in rows 18" apart, thinning to 8-10" in the row. When ripe cut the heads, drying them on canvas and then thrashing out the seeds, which can be stored in cloth bags in a dry place. Pkt. 10c; Oz. 20c; 1/4 lb. 35c.

**FENNEL, Long Sweet**  
(Foeniculum vulgare.) Hardy perennial grown as an annual for its aromatic seeds and fragrant young leaves, both used in flavoring; seeds are slow to germinate, so sow early in the spring, give full sun and ordinary care. Pkt. 15c; Oz. 50c.  
—Florentine. (F. vulgare, var. dulce.) Has greatly enlarged leaf bases from a bulb-like base, 3-4 in. in diameter; the bulbs are blanched by covering with earth and

Double Choice Mixed. Small flowers, having a charm all their own; effective for bedding, making a brilliant display yet having stems long enough to make fine bouquets for small vases and bowls. Contains many attractive colors and combinations. 1-1 1/2 foot.

—gracillima. ZIN-37. Pkt. 15c  
Double (coccinea), Red Riding Hood. Compact form and covered the entire season with double scarlet flowers, 1-in. across; they are effective in the border or would make a beautiful hedge, 1-ft.

—dahloeflora. ZIN-40. Pkt. 15c  
This species is from India, double flowers, pale yellow and the seed is rather fluffy and not like common Zinnias; we have no further description at this time.

**CREeping ZINNIA.**  
See Sanvitalia procumbens.

COREOPSIS insecta  
DELPHINIUM macrocentron  
CLEMATOPSIS stanleyi  
FELICIA hyssopifolia  
SUCCULENTS:  
BRYOPHYLLUM calycinum  
KALANCHOE phyllisora  
—paniculata  
BULBOUS and TUBEROUS PLANTS:  
DIPLODY species  
ALBUCA melleri  
—species  
ANEILMA aquinocephale  
BUPHONIA dispicha  
EUCOMIS undulata  
EULOTHIA livingstoneia  
—zeyheri  
GLADIOLUS melleri  
—permeabuis  
GLORIOSA superba hybrids  
HAENAMPHUS zambesiacus  
LYPOXIS species  
LAPEYROUSIA sandersonii  
LISSOCILUS arenarius

## FLOWER SEED BLENDS

### FLOWER SEED MIXTURES

The flower seed mixtures which we offer here are all of special value especially for those who wish to grow and observe many different flowers. The most pleasure to be gotten from these mixtures is to sow them in a seed flat or bed and then transplant the seedlings into nursery rows in the garden, from where they may be transplanted after they reach some size and you can tell what they are; it will also be easier if the seeds are screened to different sizes, which will get the same species into the same group for planting and then too the smaller seeds require different care in the seed beds than the larger ones. Mixtures can also be used to advantage in scattering them over waste areas with assurance that some species in the mixture will establish itself and thus make the unsightly spot beautiful.

### CALIFORNIA WILD FLOWERS.

MIX-7. Pkt. 15c; Oz. 60c  
A choice blend of native Californian wild flowers, containing many different kinds; for general planting.

### CUT FLOWER MIXTURE.

MIX-1. Pkt. 10c; oz. 45c; lb. \$4.00  
A large assortment of annuals with long stems, especially suitable for cut flowers and effective as well in the flower border; we recommend them especially to be planted in rows, thinly, in the garden using a few radish seeds mixed in to show the rows for early cultivation, thin plants out as they grow and begin to crowd.

### ANNUAL CLIMBING VINES.

MIX-2. Pkt. 10c; oz. 40c; lb. \$5.00  
Especially interesting and valuable for a long fence and with a proper seed bed made they can be sown in their permanent position. It will be best to plant part of the seed in April and the balance late in May, so as to be sure to have the tender ones growing too, especially if you are unable to tell the seeds apart.

MORAEA zambesiaca  
CLIMBERS:  
CLEMATIS thunbergii  
ASTROCHAENA malvacea  
ACROCETHALUS sericeus  
CROTALARIA sericea  
PODRANEA brycei  
SENECIA macroglossum  
SPHEDAMNOCARPUS pruriens  
VIGNATRILOBA rhynchosisia  
—leiaris  
—violacia  
—pandosis  
—paretiolius  
CALADENDRON capensis  
CALOTHAMNUS sanguiniis  
CALPURIA aurea

### ROCK GARDEN PERENNIAL BLEND.

MIX-3. Pkt. 25c; 1/16 oz. 60c  
This is a real find for the Rock Garden grower; contains over 300 Rock Garden perennials, many of them rare and difficult to obtain; we recommend the seed being screened to get them into different lots, planting them thinly in rows in a flat and carefully pricking them out as the seedlings form their second pair of leaves. Keep seed flat covered with a pane of glass, being careful to ventilate as the seeds germinate, as many kinds may require a month to germinate.

### ROCK GARDEN ANNUAL BLEND.

MIX-4. Pkt. 15c; oz. 85c.  
Contains only low growing annuals suitable for the Rock garden; while they can be sown broadcast over a rocky waste and thus making an unsightly spot beautiful, they can also be grown the same as early started annuals and transplanted.

### HARDY BORDER BLEND.

MIX-5.  
Pkt. 10c; 1/2 oz. \$1.50  
Contains over 100 distinct varieties suitable for plants for the perennial border. Sow the seeds much as for Rock Garden Blend growing the transplanted plants in a nursery row till they reach a size suitable for the permanent border.

### HOUSE PLANT BLEND. MIX-6. Pkt. 25c

Nearly 100 desirable species, many of them rare and hard to find, make up this blend and all suitable for house plants, a wonderful find for shut-ins and those wishing to grow pot plants; many kinds. Suggest the seed be screened and then the seeds planted in small pots with glass covers, much as recommended in the Rock Garden Blend.

### GENERAL MIXED FLOWERS. MIX-8.

Pkt. 10c; oz. 25c; lb. \$2.50  
This contains a mixture of about every type flower and especially recommended for sowing broadcast over waste places, contains all of the common annuals, biennials and perennials.

CASSIA bacillaris  
—laevigata  
—austins  
—artemisiodes  
—multijuca  
—floribunda  
—nodosa  
—spectabilis  
CEDRELA toons  
CEDRATO willmottianum  
CERCIS chinensis  
CETRUM purpurea  
CLERODENDRON fallax  
—nycrioides  
—trichophomum  
COCOA plumosus thompsonii  
CORDYLINE australis

## Lawn Seeds

We offer only the very best grades of Lawn Grasses. We suggest that you order separate grasses, when possible, rather than mixtures, as you will more likely have a more suitable stand of grass for the purpose you wish as well as for the particular soil. The mixtures that we offer from time to time, are made up especially for the season in which they are listed.

### Kentucky Blue Grass

This is the most satisfactory lawn grass for the northern part of the country and should make up at least 80% of any sowing. For sowing in March, which is the best time, a 100% seeding can be made. It requires about 21 days to germinate and thus the best stands will be secured when planted early. PREPAID: Lb. 90c; 3 Lbs. \$2.50; 10 Lbs. \$8.00; 25 Lbs. \$20.00 NOT PREPAID: 112 lbs. bags, at 43c per lb.

ANALYSIS: Pure Seed 92.27%; Germination 80%; Inert Matter, 7.04%; Weed Seed .87%; Crop Seed .32%, 2 Buckhorn per oz. Grown in Ky. This lot weighs better than 24 lbs. per bushel and is a very choice lot.

### Lawn Red Top

Where a quick growth is wanted for a start and especially on soils that are towards the wet side, Red Top makes an excellent Lawn Grass. It is a fine grass, germinates quickly and can be sown as soon as the ground is ready in the spring. Blue grass should be sown with it for the permanent grass. Red Top has a more pleasing appearance than the Rye Grasses or Timothy, which is often used for a quick growth. PREPAID: Lb. 50c; 3 Lbs. \$1.40; 5 Lbs. \$2.10; 10 Lbs. \$4.00

### Dutch White Clover

White Clover gives the lawn a dark green appearance and a velvety texture. It is quick to germinate and can be sown in March, on the snow, as well as later in the spring. It is an excellent grass to plant with Blue Grass and one of its most important advantages is that it gives a green lawn during August when Blue Grass is likely to dry up during a hot dry spell. Sow about 1/4-1/2 lbs. to the square rod on new seedings and half as much for established lawns.

PREPAID: Lb. 95c; 3 Lbs. \$2.75; 10 Lbs. \$8.25.

WE RECOMMEND for a general Lawn Grass mixture for sowing on old lawns, for March sowing, Blue Grass, 80%, Red Top, 15%, White Clover 5%. When ordered in 10 Lbs. lots, use the 10 Lbs. rates above for prices.



## • In The Mail

(Continued from Page 1)

letter she says our catalog is "truly a wish book."

PAUL F. FRESE, editor of that fine publication, the Flower Grower, writes us a very nice letter in which he says he is "rather fascinated with the way you have worked up your seed list. In fact, I have been amazed that you could republish it so frequently. I have always felt that any horticultural catalog is improved by having some personal slant and news and notes included. This you have succeeded in doing exceptionally well." And while on Mr. Frese's letter, we want to mention, too, that the Iris list in our August issue as "Future Iris Favorites" was the list in the Flower Grower. We want to give this credit to them for this extra fine list of Iris varieties. By the way, the Flower Grower seems to be read in about every part of the world; we have had people in Siam, China, Columbia, Brazil, Argentine, Central America, Alaska, and many other places write us to this effect.

MRS. ELIZABETH CRANE of Haverhill, Mass., sends us in a very nice report of Chirita, from her Robin on this genus. She says:

These are very succulent soft perennial herbs found in China, India and Java. Some have tuberous roots while others are fibrous. They grow readily from seed, germinating in 3 weeks. An enclosed glass or wooden case with under heat is a great help in starting the seed as they are very small and great care should be used in sowing them. The following are notes from different reporters: N. Y.—All the Chirita seedlings have thread like frail looking stems with two tiny leaves. Mass.—Chirita hamosa, the oddest seedling she ever grew; of the first two leaves one grew very large and the other remained tiny, then the tiny one curled under the larger one and finally disappeared and then back on the stalk an inch, 2 more uneven leaves appeared but with not more leaves of uneven size are showing. Colo.—C. lavendulacea is fibrous, has few leaves until it starts to branch, then many leaves and flowers develop; flowers about 2" long, tube white corolla lavender-blue. Stem thick, translucent like Impatiens; the plant is very delicate and pretty. Mass.—Seedlings must be watched carefully and not given too much moisture or they will dampen off; when potted up they should be watered from bottom or care used in top watering, too much moisture around stem is fatal. Mass.—Sowed seed Aug. 31st and now Oct. 1st the seed is germinating. Soil was ½ sifted peat and ½ good soil, keep in warm place in kitchen. NY Had good germination but many dampened off, she now finds that the lids on all seed jars must be lifted daily for airing, after second set of leaves form, increasing it each day till cover can be left off.

Thanks for your very nice report on Chirita, Mrs. Crane. We have seed of several species coming for this seed year and would like to hear from others too.

MRS. C. A. PARKINSON writes us about new crop Delphinium seed and double Gypsophila. As our orders are filed under the states and she gave no address on her letter, we have not answered her; write again Mrs. Parkinson.

PANSIES. It is hard to say which is the best flower, for me,

with many hundreds to mention, but this last year the Pansies have been in view just about the entire time. This spring the plantings in our trials, of W-F Special Blend were the showiest and continued right up into August when the hot sun finally got them but right after that the new seedlings began to flower and even at the end of Oct. they still are a mass of bloom. It is hard to say which blend is the best all seem to have such wonderful flowers. The Black Imp Violas are "little imps" all right for they stand up so straight with their flowers bent back just like a little imp would stand.

PENSTEMONS. These as a rule germinate best after a freeze but this summer 24 species were planted in vermiculite and of the 24, 8 germinated readily and to save space will just give the catalog numbers: 81, 69, 58, 72, 71, 78, 77 extra good 79. They were sown June 22nd and germinated about July 18th. However those wanting to start Penstemons should order seed now and plant it in the garden or cold frame so that the seed will germinate in the early spring. This will save a lot of work too.

MRS. A. DANKO of Parma Heights, Ohio, write that she gets 80% germination with our seeds and that some of our seed that flowered this summer were blue ribbon winners.

Mr. E. B. ANDERSON President of the Alpine Garden Society of England writes us that he is extremely interested in our catalog and that it has no counterpart in his country.

John McDannald of Medesto, Cal., writes "I am so pleased with your paper it is the finest I have ever seen in flower descriptions and pronunciations. I hope I will not miss an issue as it is so instructive and educational. I have over 200 varieties of flowers growing in my garden and enjoy getting new ones." And we hope, Mr. McDannald that future issues will be even more instructive and helpful. May be, some of our readers will send in some short items on their favorite flower, especially as to its behavior and cultural requirements and too, points they have learned in growing it.

Rosemary, that's a pretty name, but not to us any more. Herb seed has been hard to secure since the war and amongst other herb seeds we had contracted, Rosemary was promised to the last moment, in fact after the catalog had listed it and then failed to come in; well, it seems everyone wants Rosemary, and now we have to write each one saying it won't be sent out this spring. And mentioning refunds and that is another unpleasant duty, not that we dislike sending customers remittances back, but to have to make excuses and to disappoint customers who are looking for something we have listed. Small items, 10c-15c, are usually returned with your order, unless we expect seed to still come in; amounts between 15c and 95c are usually taken care of by refund slips; and amounts of \$1.00 or more, checks are sent. A very few customers dislike these refund slips, and if we knew before hand, we would not send them but the reasons are these: first checks for less than a dollar are costly and troublesome at both ends, they require being entered all thru the books and with the shortage of help we have experienced, these refund slips are very easily handled, and just about 99% of these slips are returned on future orders within a month

## • Heather

(Continued from Page 1)

the time the sunlight strikes it and the soil kept moist by watering thru a very fine hose.

Sowing is carried out during March or April according to the advance of Spring. The seed germinates in 3-7 weeks and is transplanted when the seedlings are ½-2 inches high, according to the species. I transplant in blocks one inch square and separate into individual plants after one season's growth in a sheltered spot.

The Heathers require a lime-free soil, with the exception of the Ericas: — carnea, mediterranea, stricta and vagans, which will tolerate a little lime. The addition of granulated peat to the soil helps the formation of a good root system and maintains the plants in good condition. — By James W. Porter, Belfast, Ireland.

We are offering seed of the best Heathers for this coming season from the famous plantings of Mr. J. W. Porter and his exhibit at the Belfast Museum and Art Gallery in August evidences the fact that more hardy Heathers are found in Ireland than in any other country.

Many of those shown have been collected and grown by Mr. Porter at "Hillside" whose heather garden is well known to garden lovers. The collection contained over 60 varieties, varying in size from a few inches to a few feet; color ranging from pure white thru various shades of pink to deep crimson. An unusual plant shown is a green flowered variety of the Cornish Heather. Six double-flowered varieties were also shown, including Erica Mackayi which was first found in 1869. The foliage varieties include Erica cinerea Pure Gold, found in Cavehill, Belfast, and a bright golden form at Ballymagarrick.

In a later issue we will list several choice species and with full culture information. Seed is available in the following: Erica carnea, Mixed; E. Springwood, white; E. alba; E. verellie, E. praecox rubra; E. mediterranea mixed; E. m. alba, tall form; E. m. alba, dwarf form; E. m. W. T. Rackliff, best white form; E. m. Red form.

## • Seed Bulbs

(Continued from Page 1)

east coast shrub.

### Genus Physalis

We would like to contact anyone in a position to furnish seeds of or information on different species of this genus.

Especially wanted are the species: grandiflora, fendleri, crassifolia, missouriensis, minima, also several other species.

This genus is commonly known as the Ground Cherry or Husk Tomato.

Either write us direct or Miss Margaret Young of the Blandy Experimental Farm, University of Virginia, Boyce, Va.

or two. We make great pains, however, not to list anything that cannot be sent, its a costly listing.

Pansy and Delphinium seed: usually Pansy seeds germinate with little trouble but with Delphiniums it is different. They are not hard to germinate at all if a few precautions are taken, which you will find fully discussed in these pages during the next 2-3 months and before the summer planting starts, but what we wish to mention here is a letter from Harry Sommerfeld of Rockwell City, Iowa, in which he says, "The Pansy and Delphinium seeds I received last fall, I do believe, every seed grew and they sure came up in due time. I enjoy your catalog so much, also the new kinds of seeds listed." Once in a while someone will write in to the opposite effect and it really is hard to answer them; we find it easy to make a failure of a germination, just a little neglect or oversight will finish the whole seeding.

H. E. Saier

The entire Sweet Marjoram plant is harvested, hung up in small bundles and dried, store immediately after drying in tight glass jars.

## Germinating Flower Seeds

Fall sowings should be delayed until the last possible moment unless it is definitely known that the seed will not germinate within a few weeks, or unless greenhouse facilities are available. Very few plants, other than weeds, can survive a severe freeze unless they have developed considerably beyond the cotyledon stage. Sowings at this time may be made in carefully prepared beds in the open, yet there is considerable danger of loss, as some seedlings will appear with the first warm days of spring, and a late cold spell may destroy them entirely. If the seeds are at all rare or precious, they should be sown in a frame so that protection during spring cold snaps is possible. Fall sowing seems almost necessary for satisfactory germination of a few things, particularly Helleborus and Lilium candidum; it is also advisable for species of the Buttercup family, especially Anemones, and seeds of trees and shrubs. Penstemons will probably germinate better from fall sowing, yet results from early spring sowing have shown that most species do not require the long spell usually assumed to be necessary.

Winter sowing, that is, during the months when the ground is frozen, need be resorted to only in the case of late arrival of the few kinds of seed that should have been sown in fall. It will probably be necessary to sow these seeds in pots or flats, after which they should be set in the open, or in a cold shed, for the remainder of the winter.

Very early spring, that is, the first mild days, seems to be the best time for sowing seed of most hardy perennials, and especially of alpine. Here, where at least occasional freezes, and an occasional snow, can be expected into early May, I make most sowings during the last two weeks of March. All sowings at this time are made in pots or flats, or in a cold frame if available; open ground sowings before the middle of April have rarely been successful. For a milder climate than that of central New York, the dates may be advanced considerably. The idea is to assure the seeds of at least a month of cool to cold weather before germination is desired. Most rock garden plants require at least this brief cold treatment, and few seem to object to it. Crucifers, composites, Geraniums, and Erodiums are as well off, at least, if not sown until several weeks later, when mild weather can be expected. Primula auricula and Sempervivum will not germinate well without this brief cold treatment, and late sowings of these two will not come up till the following spring.

Winter covering of seed pans with snow seems rather ineffective. I have spent many hours shovelling snow over pots that had been sown in fall, or had failed to germinate the previous spring, without seeing appreciable improvement in germination. On the other hand, if the seed beds or pots are exposed to late spring snow flurries, seed will germinate as if by magic almost as soon as the snow melts. Better results have been obtained when the frames were covered by hotbed sash as soon as the snow had stopped falling.

Freezing of seeds in the refrigerator (some gardeners freeze them into the center of ice cubes) is an alternative treatment that gives good results. At present too little is known of the proper time the seeds should remain in the refrigerator, with periods from a week to more than a month being recommended. Experiments are also being made with deep freeze treatment, but I feel that such extremely low temperatures will prove unnecessary, and perhaps even harmful. Pouring hot water over seeds, especially of Primulas, has proved successful in some cases (results here, with controls, have shown nothing advantageous in this method on certain species); no definite temperature is ever given, but apparently 125 to 150

## The Lily Of The Incas

Along the slopes of the mighty Andes, and near the sea at their base, is found a race of Amaryllis relatives known as Alstroemeria. Popular fancy has linked their name with that of the Incas who once lived there, and today, it is said, these flowers are used to adorn Catholic shrines. Years ago I met many of them in the Chilean foothills, sometimes at the very edge of the sea. The flowers entranced me, but I felt them utterly useless for my cold windswept garden, for there seemed no way to compensate here for the burning sun and scanty rainfall of the nitrate deserts of northern Chile.

Last spring a generous friend sent a number of roots of Alstroemeria aurantiaca, which were planted on the east side of an enormous lilac—with no little mis-miving, yet with the hope that they might flower once. Last spring was the most devastating I have ever experienced, after an abnormally cold winter, and fully hardy plants which had never caused me the slightest difficulty succumbed, including many within a few feet of the sensitive Alstroemeria, which was protected by only a few inches of straw. Spring came, and as I expected, there was no sign of life in the alstroemeria bed; then, one day, a few spears of green, and at last in July, flowers. These, produced in large clusters from a couple of months, were tawny orange in color, with six rather irregularly shaped petals curving somewhat in the shape of a gigantic parrot-beak. They were born on stiff upright stems of more than three feet, set with rather short and narrow grass-like leaves.

The flowers and habit of all the Alstroemerias, with the exception of a few tender climbers more correctly known as Bomarea, are similar, but they range in color through pink, blood-red, and violet, with a host of subtle intermediate shades. A. chilensis should be at least as hardy as A. aurantiaca, while A. ligtu is reported more tender. As for the almost legendary A. violacea, just now beginning to appear in lists, I was so disappointed in its color, when at last we found it on the fog-bathed Morro de Copiapo, that I'm willing to let someone else search it out. It is, I must admit, lovely in its soft violet and gold markings, but so far from the glowing violet of descriptions, that I have never forgiven the plant the labor and travel its finding cost us.

Alstroemerias probably like a rather light sandy soil, and at least some species will appreciate a fertilizer rich in nitrates, while most will prosper in the driest, most sunny position you can find. However, do they need it? My plants are growing in ordinary garden loam, in an east exposure, sheltered from west winds, and seem to be increasing mightily.

Fall sowing of seeds seems best, and preferably this should be in a cold frame. Even for the experts, however, germination is never very generous, and one should be content with a few plants from a packet of seed.

degrees is indicated.

Some few species seem to require not one, but a series of cold spells before they will germinate, and ungerminated sowings should be left undisturbed over two years at least. It is quite possible, however, that ripeness or after-treatment of the seeds in question, rather than an inherent character, is responsible for this long delay. I am informed by a German specialist that most androsaces will not germinate in less than one or two years, yet an occasional seedling has appeared from my sowings within a few weeks. One simply cannot be arbitrary on the matter of germination!

(Continued on Page 23)

Dry parsley in the regular way and as soon as dried store in tight glass jars. The plain leaved varieties are best for drying.

## Ordering—Important

First be sure to print your name and address. We get hundreds of letters every week of which it is impossible to make out properly.

Remit in checks, money orders or, at your risk, in cash. We did not have a single cash remittance lost last year, but it could happen. Orders amounting to 25c you can remit in 1c stamps; 25c - 50c in 3c stamps; 50c - 95c in 5c or 10c stamps, but over this amount do not send stamps, please. Michigan customers please add their 3% sales tax. Don't forget.

Orders for seeds, bulbs, plants, etc., are not mailed in one package. Seeds usually go out by return mail and are not acknowledged, but if there is any delay in shipping you will receive an acknowledgement.

On Flower Seeds there is a key-number just before the price. To save you a lot of writing just use the symbol. It is short and easy.



## Methods of Germinating Primulas

by Florence Levy

With the discovery of simple methods of pre-treating Primrose seed, older seed can be germinated as easily as fresh which overthrows the theory that Primrose seed loses its viability quickly. On the contrary, Primrose seed retains its germinating powers longer than soft-coated seeds, requiring only penetration of the ever-hardening outer seed coat.

The seed coat of fresh seed is naturally softer than older seeds, moisture content being at the maximum, therefore the ease with which fresh seeds germinate under warm and moist conditions. As seed ages, the seed coat—of protective covering—hardens with the diminishing water content, and with this reduction of natural moisture the tendency of the young plant within the seed is toward partial and finally entire dormancy. The hardened seed coat then seems impervious to water, the absorption of which is a necessary preliminary to germination. Consequently the removal, softening or rupturing of the outer covering removes the obstacle in the path of quick germination.

Primrose seed can be sown in summer, late fall, winter, and spring. It should be pre-treated only when sowing from late winter through the spring months to bring on germination with warming temperatures and after danger of hard freeze is past. Three simple methods of pre-treating seeds are freezing, scarifying and the use of hot water. Of these methods, the hot water treatment is quick and effective with the majority of varieties and requires no advance preparation. Freezing is also efficient and safe but requires a period of waiting, which is sometimes desirable. Scarifying the removal of the seed coat by abrasion, requires sandpaper which is not usually at hand and which, if used, can quickly penetrate beyond the outer covering and injure the germ within. Therefore, only the hot water and freezing methods, and a combination of the two for the more stubborn types, will be outlined.

**Hot Water Method:** For use in late winter and spring. After seeds are sowed and firmed into the soil or other seeding material, sprinkle thoroughly with water that is very hot but not burning to the hand. Temperatures between 115-120 degrees—using an ordinary thermometer for testing temperature of water—are safe and efficient. Cover with pane of glass or glassine. Seeds need not be covered with soil. A very light sprinkling of sand can be used to keep the seed from rolling if desired. Repeat the hot water treatment the next day at a temperature of from 115-120 degrees after which tepid water may be used when and if watering is necessary before germination. A simple watering device is a bottle equipped with laundry sprinkler attachment.

Remove the glass covering when germination begins and sift a fine layer of sand over the top. Thereafter use cold water for thorough waterings, or stand pot or flat in water until soaked. Avoid frequent and light sprinklings after germination has started.

**Artificial Freezing:** For use in late fall, winter and spring. Hardy Primroses, or Primulas to use the correct term, are cold climate and alpine plants, the seeds being accustomed to periods of freezing and thawing in their native environments. This can be duplicated artificially in the refrigerator, or naturally by sowing in the late fall and allowing the elements to do it. To freeze artificially, place a few drops of water on the seeds in the packet, stir until massed together, fasten packet securely, wrap in waxed paper as insurance against spilling, and place in freezing unit.

A ten-day treatment with four or five thaw periods of not more than a few hours each will noticeably speed germination. Make certain seeds are always moist

during treatment. Seeds may be allowed to freeze for months if sowing is not immediately convenient. Thaw occasionally, when thought of, and before replacing in freezing unit add enough water to mass together. Duplication of natural frost action is the principle involved.

**Artificial Freezing and Hot Water:** For use in late winter and spring on slower-germinating types such as Asiatic Primulas and Juliara hybrids. (All others including Auriculas, respond to one treatment or the other and have not been experimented with in this way.) Freeze artificially for a ten-day or two-week period, or longer, then use two applications of hot water, 115-120 degrees, as outlined under that heading. P. rosea, a notoriously difficult species to germinate when aged, sprouts like grass within a few weeks using this combined treatment.

### PLANTING INSTRUCTIONS

**Seeding Mediums:** For those who prefer soil, equal parts of sandy loam and leaf mold screened and mixed is a standard compost.

Sawdust from broadleaved trees, alder, oak, maple, elm, is very satisfactory. It can usually be obtained from small mills or furniture factories. Put sawdust in a sack and soak thoroughly in hot water. The addition of coarse sand is advantageous to keep the texture open.

**Drainage:** A layer of coarse drainage material should be placed in bottom of flats or pots leaving drainage holes unobstructed.

**Seeding:** Over the drainage material place soil or sawdust, level off, tamp down gently and water thoroughly. Sow seeds thinly for rapid development and good air circulation. Either broadcast or sow in rows, the latter method allowing cultivation between the drills with a kitchen fork for aeration and growth. Slightly depress the compost or sawdust into rows ½-1 inch wide and gently firm seeds before watering in. Remember: Sow thinly.

**Covering Seeds:** Seeds need no soil covering but if used, barely cover with sand or very fine soil. Deep sowing checks germination. A glass pane or glassine covering placed over the container is all that is necessary. Moisture condenses on the glass and keeps the seeds uniformly moist. Remove when germination begins and sift lightly with sand.

**Watering:** Water freshly ripened seeds with tepid water, or at 100 degrees once only. See Hot Water Method when sowing in late winter and spring. After seedlings appear, avoid light and frequent sprinklings which brings on damp-off. Placing the container in hot water; or in water for a thorough watering is the best method. Sink the container, in a pot, in moist soil or sand in shady, protected place to maintain uniform moisture.

**Protection:** Seeds and young seedlings should be kept from later morning and afternoon sun, heavy showers, and safeguarded from birds and pests. Air circulation should always be good.

**Pest and Fungus Control:** Damp-off and aphids are best controlled by prevention. Regular dusting several times a month with a good fungicide-insecticide from the time germination begins until placed in permanent positions will usually keep your seedlings vigorous and healthy. There are many good products on the market. Spradusto, the first one tried at Barnhaven, was found safe and effective. The ferimate and sulphur in Spradusto controls fungus and the 5% DDT, rotenone and pyrethrum kills insects and other pests. Use any inexpensive duster, being sure the surface of the soil or seeding medium is treated and the underside of foliage dusted.

**Nutrients:** When growing in mediums other than soil, nutrients are often used. We have found Plant-Chem Salts a safe and complete plant food which also in-

## Rare Species Of Flower Seeds

There are some 200 additions in this issue, mostly seeds of rare species and during the next month or two, there will be added close to 1,000 others. Seeds that are now on their way but too late for classification in this issue are:

AGAPANTHUS mooreanus nanus  
ACONITUM wilsoni, var. Barker  
DIERAMA pulcherrimum  
EUCRYPTIA lucida  
HESPERANTHA bukrii  
HOMERIA comptoni  
LILIUM centi-gale  
—martagon (English Selection)  
IRIS milesii  
HYPERICUM chinense  
PRIMULA smithiana  
THALICTRUM dipterocarpum  
RHODODENDRON tephropeplum  
MATHIOLA bragginsii  
GLADIOLUS prim. "Souvenir"  
LILIUM candidum Salonika  
NARCISSUS bulbocodium  
NOTHOLERION thompsonianum  
CODONOPSIS clematidea  
CLEMATIS macropetala  
ACONITUM lycoctonum  
—volubile  
AETHIONEMA theodorum  
ALLIUM farreri  
—pulchellum  
—sphaerocephalum  
ALSTROMERIA ligtu hybrids  
ALYSSUM scryphillifolium  
ANEMONE lesseri  
ANTHERICUM liliago  
—ramosum  
AQUILEGIA canadensis  
—glandulosa  
ARABIS blepharophylla  
ARMERIA alpina  
ASPHODELINE luteus  
ASTER aphinus  
—farreri  
CALCEOLARIA crenatifolia  
CAMASSIA esculenta  
CAMPANULA incurva  
—punctata  
—trachelium album  
CLEMATIS macropetala  
COLCHINUM giganteum  
CREPIS incana  
CROCUS aureus  
—chrysanthus  
—fleischeri  
—speciosus  
—tommasinianus  
CYDONIA cathayensis  
—maulei  
—sargentii  
—simonii  
CYTISUS decumbens  
DELPHINIUM sinense  
DIANTHUS proliferus  
DIGITALIS lutea  
DIPLARRHENA morea  
DRYAS octopetala  
ECCREMOCARPUS scabei  
EDRAINTHUS circinatus  
ERINUS alpinus  
ERYTHRONIUM californicum  
—orgeonum  
—revolutum johnstoni  
FRANKLENIA laevis  
GALANTHUS elwesii  
GENISTA delphinensis  
GENTIANA acaulis  
—septemfida  
GERANIUM sanguineum tancas-  
—trienae  
GEUM borisii  
HELLEBORUS corsicus  
—niger  
—orientale  
HIERACIUM villosum

cludes trace elements and hormones. Reduce strength when using on seeds and newly germinated seedlings.

**Transplanting:** Seedlings are ready for transplanting to a richer compost when the first true leaf develops. If more growth is desired before transplanting, seedlings can remain longer in the seeding medium if seed was sown thinly enough for proper development. Compost may be a combination of any number of materials but should contain a good supply of coarse sand for quick drainage and enough peat or like material for porosity. Either screened rotted wood, leaf soil or good loam or combinations of these materials should be added to the coarse sand and peat. The further addition of old screened barnyard fertilizer promotes quick and vigorous growth. Do not use chemical fertilizers. A nutrient such as mentioned above is safe. Keep transplanted seedlings moist and dusted against aphids.

HYACINTHUS amethystinus al-  
—bus  
INCARVILLEA grandiflora bre-  
—vipes  
IRIS bucharica  
—clarki  
—cristata  
—innominata  
—laevigata  
—milesii  
—reticulata  
—rubro-marginata  
—ruthenica  
—straussii  
—tectorum  
—vicaria  
—Germanica Hybrids (some Eng-  
lish grown stock)  
LEWISIA howellii  
KNIPHOFIA nelsoni  
LILIUM willmottiae  
LINUM narbonense "Peto"  
—salscoides nanum  
LYCHNIS alpina  
—flosculi  
—haageana  
MUSCARI ajacium  
—latifolium  
NARCISSUS moschatus albus  
ONIPHALODES cappadocia  
OROBUS vernus  
POLEMONIUM panciflorum  
POTENTILLA pygmaea  
PRIMULA florindae  
PUSCHKINIA libanotica  
ROSA farreri  
SCABIOSA ptercephala  
SCHIEVERECKIA podoica  
SENECIO doronicum  
SILENE alpestris  
—armeria  
—schafta  
—veseliaca bosnaica  
SISYRINCHIUM augutifolium  
—bermudianum  
SYMPHYANDRA wanneri  
TOWSENDIA exscarpa  
TRILLIUM erythrocarpum  
—grandiflorum  
TRITELIA inflora  
TROLLIUS europeus (orange and  
—yellow)  
—ledabourii  
TULIPA biflora

—eichleri  
—kaufmanniana mixed  
VIOLA biflora

The list could be added to by over 200 species from South Rhodesia, which included seeds of many rare bulbous plants as well as trees and shrubs of great value.

The quantities in many of these offerings is rather small, in a few cases, only a very few packets, those wishing any of the above should reserve them now. Price per packet, 50c.

**VEGETABLE SEEDS:** Due to lack of space in this issue, the complete list of vegetable seeds will be ready the early part of December and published in a separate list.

**NOTE:** We have not had time to check the spelling or to make proper corrections in the above list as it goes to press at the very last minute, therefore allow for a misspelled word here and there.

## South Rhodesian

(Continued from Page 20)

CRATAEGUS coccinea  
DAIS cotinifolia  
DOMBEYA masperi  
DURANTE plumeri  
BYSCHORISPE thunbergiflora  
ERIOGONUM giganteum  
ERYTHRINA indica  
—humeana  
ERANPHEMUM nervosum  
EUCALYPTUS caesia  
—ficifolia  
—cracis  
—rosea  
—torquata  
EUPHORBIA pulcherrima  
—splendens  
GALPHINIA glauca  
GAIBENIA-florida  
GLIRIDA maculata  
GREVILLEA banksii  
—robusta  
HELICHRYSUM cordatum  
HIBISCUS sinensis

## SQUASH and PUMPKIN

Squash and pumpkin varieties as perhaps is well known, can be placed in three definite, distinct families. The writer has often thought, and indeed wished that these three families could go under one name, in other words, call all pumpkins or all squash, or vice versa, but long usage is such that it would not be advisable, nor wise or indeed, possible.

The three definite, distinct families into which squash and pumpkin are divided are, CUCURBITA PEPO, to which belong the following pumpkins: SMALL, SUGAR, CONNECTICUT FIELD, WINTER LUXURY, and in SQUASH, roughly the entire list of Summer Squashes, such as the WHITE BUSH SCALLOPS, the EARLY GOLDEN CROOKNECK, the various COCOZELLE and ZUCCHINI types, the TABLE QUEENS, all of the STRAIGHTNECK varieties, the FORDHOOKS and all of the VEGETABLE MARROWS. Strictly speaking then, all varieties of the Summer Squash could be called pumpkins, truthfully.

The second branch or family of squash and pumpkin are known as CUCURBITA MOSCHATA, to which belong all of the various CUSHAWS such as STRIPED, WHITE, GOLDEN, JAPANESE PIE, and TENNESSEE SWEET POTATO, LARGE CHEESE, KENTUCKY FIELD and DICKINSON.

The third family are known as CUCURBITA MAXIMA, and include roughly the so-called Winter Squash, such as BANANAS, all of the HUBBARDS, the GREEN and GOLDEN DELICIOUS, WARREN, KING OF MAMMOTH, and all squashes that are used chiefly when mature or when for winter use, and invariably have running or vining plants.

These three families can be clearly and easily distinguished one from the other. C. PEPO can be distinguished from the other families by the fruit stem being five angled, or having five sharp edges on the stem. Furthermore, the leaves are always sharply serrated and "rough" or ½ spiny. The leaves are often mottled with white or gray blotches. The seeds are buff or tan colored mostly.

C. MAXIMA has a roundish stem that greatly expands at the union with the fruit, and without exception the vines are trailing or running. The leaves are velvety rather than spiny; generally speaking are heart shaped, not deeply cut or serrated. The seeds are large, mostly pure white and highly enamelled, however, some seed such as the BANANAS have brown, highly enamelled seed.

C. MOSCHATA is the most variable of any of the three branches. Roughly, it is closely related to C. PEPO. All C. MOSCHATA have running or trailing habits, the fruit stems are always five sided, leaves are three to five lobed, with whitish blotches and are soft or velvety. Flowers are larger than in the other branches and lemon yellow in color. All varieties in this group are used only when fully mature. The seeds vary in being high enamelled, and also rough or furry.

It is a well known fact that squash and pumpkin are likely the most difficult varieties to keep straight and pure. There is a tendency to cross, each with the other to some extent at great distances, due entirely to the work of insects. However, C. PEPO will not cross with C. MAXIMA, but both C. MAXIMA and C. MOSCHATA cross readily, if pollinated by hand.

Both squash and pumpkin are native to the Americans, and were a prime favorite in pre-historic times, even the blossoms being used as food and rated quite a delicacy, and indeed are to this day to some extent. They are definitely a warm weather plant; hence, thrive to perfection in California. We could report from observations some phenomenal yields from both squash and pumpkins, unbelievable almost.

We do not believe that any family of vegetables has the intricate complex varieties as do squash and pumpkin. Virtually every conceivable color can be found in squash and pumpkin, also size, and shape. One of the prime favorites in South Africa for instance is a C. PEPO no larger than an ordinary orange. Then again, we have the hundred weight C. MAXIMA that easily will attain a weight of 100 lbs. Then, we have every size and shape and color in between we do believe.

Unquestionably, the food value of all three is very high. The small fruits of C. PEPO, with the embryo seed constitutes a very nutritious dish, whereas, the C. MAXIMA, capable of storage for many, many months, constitutes an important food item in many areas.



# German Letter

(Continued from Page 1)

very slowly. About 3000 varieties of flowers from all countries of the world are assembled here as if they would meet for an international fair. As we are not allowed to import flower seeds, we started this year to growing import-crops such as Statice, Zinnias, Cosmos, Centaurea moschatas, Ipomoea Heavenly Blue and other and they have grown fine up to now. Only our Sweet Peas do not reach the standard of California. Asters, Snapdragons and Marigolds, and the like, are all planted by hand from the seed beds on hundreds of acres, which involves a tremendous amount of hand labor.

In this time of food shortage, the areas, naturally, have been reduced, but one can't get along without flowers. Tobacco is grown on a large scale for us men but our women, their sincere wish, is to have a small flower corner in her garden. We have the cemetery gardeners asking for Pansies, Begonias, Ageratums and other bedding plants; and also huge numbers of worker's gardens which at least has some sun flowers, mixed annuals, etc.

This queer old town of Quedlingburg near the Harz mountains suffered no hits during the air raids of the war and I often wonder if the pilots of the thousands of planes that flew by day and by night over these flower fields guessed anything about this silent tribute paid by a peaceful population as a matter of course to British and American botanists and gardeners, as in times of peace?

I remember reading the name "Daybreak" on a label when the sirens of the distant town announced the approach of an air-squadron. Well let us look forward to a new daybreak without sirens. We gardeners must think in an international way we are botanists, we have to exchange seeds and plants to get finer crops for the benefit of mankind and to perceive at more frequent intervals "the rainbow in the sky."

The skill and work of the gardener can really create wonders and you need only to compare present day quality of flowers to those of half century ago. Over there a lot of breeding work is also done too, for instance, in the creation of "polyploid" forms, plants that show a double or triple set of chromosomes, the carriers of the factors determining heredity.

Much work along this line is being done here, too. Not every polyploid is a sensation, to be sure, but wide unexplored fields are here left open for the future advancement in horticulture. Each chromosome, as you know, may be described as a "string" of quality determiners or genes - so to speak. And each gene in such a string of chromosomes has its special task in the hereditary transmission and either in increasing the whole set of the aim of the plant breeder is either in increasing the whole set of chromosomes by drugs or X-ray treatment or to induce an increase of a definite gene of the whole set or to bring about a variation.

Amazing results were practically achieved here in increasing the quality or amount for "scent" and for "size or bloom" to be associated or leashed, as we say here, to "doubleness of blooms". This brought forth the "All-Double" Stocks by Prof. Pappert in Berlin and further developed and propagated by Schreibers, now DSG, at Quedlingburg. Anyone can tell at a glance the double flowering plants by their light green colored foliage, these seedlings giving a 100% double flower, while the dark green foliage seedlings are single flowered. This is a real advance in horticulture which will likely substitute all existing varieties of Stocks by the All-Double strain.

The food problem compels us to use, to the very best advantage, every inch of soil; not only must the plant be improved but also the environment. The chemical elements, which we call here "trace elements" such as bromine, iodine, etc., if lacking in the soil will affect many plants and surely the well known "wilt-disease" of Asters is due to this lack of one or more of these trace elements.

# Primulas

(Continued from Page 22)

## MID-SUMMER SOWING OF FRESH SEED

The seed coat of fresh seed is soft and needs only tepid water to bring on germination. Germination can be induced in only a few days however, by using water 100 degrees once when waterin-in the seeds after sowing. Immerse ordinary thermometer for testing temperature of water.

Fresh seed sown in July should be kept as cool as possible and growing steadily to make husky seedlings for early fall establishment. The one possible difficulty in summer sowing is unsuccessful wintering-over of seedlings. Although hardy, root development may be insufficient in many sections to hold the plant in the ground during freeze and thaw periods. In the Pacific Northwest try to get them to permanent positions not later than September and cover with evergreen boughs during the winter if severe and without snow. In the east and middle west and other areas of colder and earlier winters transplant to cold frames or to flats and store in a cool light room or basement window growing them on during the winter for spring bloom. In coastal California and other mild-winter sections seedling growth continues without protective measures.

In addition to keeping germinating seeds cool during the summer, precautions should be taken against fungus and insects. Note under heading Pest and Fungus Control.

Do not discard containers after removal of seedlings. Many ungerminated seed, and often the best, still remain. When transplanting disturb soil surface as little as possible. Keep containers moist and protected from rain and birds.

These points will not be new to you over there but they will show that gardeners are a large family scattered all over the world and all interested in exchanging their experiences. During my 30 years of gardening. I have met a good many gardeners, hundreds of whom come to see this big seed growing center here, and from every part of the world. If we could not make ourselves fully understood, there was always the latin names for the plants and for the rest we sympathized always in a general way. They were always interested in something "new" in the gardening world. They were plain and open hearted fellows and did not mind a rain, when outdoors or too much sun. I have had a gardener for a friend who had charge of one of the large parks of the Bosphorus, in Turkey, who spoke five languages fluently; he smoked his nargileh or water pipe daily and when he became blind in old age, he could still tell the dry branch of a tree by the touch of the hand and then cut it off. He was my refuge, when I was a boy, this patient excellent man and too, a real educator. By the way, this reminds me of his work shop; they are the same the world over. You will find seed bags with pictures or not, yellow wooden labels, raffia, dried tobacco leaves of their own growing, seed catalogs and their tools on the racks. During inclement weather they will set on a wooden bench with pipe, wet knives, clean bulbs or make up a seed order, which always is one of the great pleasures of the year and they rejoice in selecting all the wonderful new plants for the coming season. When these gardeners arrive at 70 or 80 years, and sturdy fellows they usually are, they still will order and plant trees with the hope of seeing them when grown up and of gathering their fruits; optimistic on the whole and not a pessimist among them.

And now let me close in the hope that common interests in this beautiful world of ours we live in, will scatter all clouds and contribute a peaceful future for our mankind.

Yours very truly,  
W. Schrader

# Gesneriaceae

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growing. Possibly some of our readers, especially in the southern states and California, can help by telling of a friend, amateur or professional, who grows species of any of the following genera: Niphaea, Dicytra, Naegelia Isoloma, Gesneria, Episcia, Alloplectus, Columnea, Agalmyla, Trichosporum, Mitraria, Conandron, Codonanthe, Besleria, Acanthoneuma, Boea, Corytologia, Cryptantha, Klugia, Lysionotus, Oreocharis, Rhabdanthus, Roettlera, Didissandra.

The family Gesneriaceae is botanically related to the families which include the Trumpet Vine and the Penstemons; its most familiar members are plants forming rather flat rosettes of rather hairy leaves, over which rise relatively short stems bearing large and showy flowers; tubular, trumpet-shaped, bell-shaped, or flat, in very pure and brilliant colors. There are others which are vines or shrubs, but these seem in general to have smaller and less showy flowers. It is said that, unlike most plant families, members of different genera will cross freely, so that possibilities for the hybridist are almost unlimited; experiments with the group will be interesting, and perhaps very rewarding.

Most, but not all, members of the family come from tropical regions of high humidity, and formerly were supposed to require cultivation in a very warm greenhouse; the success of vast numbers of amateurs with the African Violet, and with Gloxinia, under ordinary conditions of window gardening, is doing much to disprove the necessity of such treatment. Apparently the principal requirements, and the conditions under which any unfamiliar kind should be grown, are those outlined under the description of Saintpaulia; yet Streptocarpus and Gloxinia seedlings are thriving in an exposure and atmosphere which did not satisfy the African Violet, so that some, at least, are far less fussy than had been expected.

It is not generally realized that there are at least two kinds which are fully hardy in the North, if grown in leaf-mold soil in a shady crevice in the rock garden: Ramonda, which looks very much like the African Violet, and Haberlea, very similar in plant, but with thimble-shaped lavender flowers. Jankaea heldreichii, with leaves covered with silver silk, before the war was so rare that its possessors were plutocrats of the plant world; it was probably hardy, but too precious to risk in the open. Conandron ramindioies, though much less hardy, prospered in a sheltered garden in Syracuse, N. Y. No other of the family, probably, will survive a northern winter.

—Dr. C. R. Worth

# Germinating

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Fall sowing has long been practiced in the case of some hardy annuals, such as larkspur and sweet peas, though in the latter case the risk of rotting must be considerable. Here the idea is to sow so late in fall that the seeds will not germinate at that time, but will appear long before the soil, in spring, is in condition for sowing. Such plants are much sturdier than those from spring sowings, flower earlier, and are in better condition to resist summer heat.

In conclusion, if one has a long cold winter, with much snow on the ground, and few or no thaws till early spring, fall sowing is a safe practice for seeds of almost any hardy plants. If, however, frequent mild spells are to be expected, and greenhouse facilities are not available, it is far better to delay sowing of most hardy seeds until the first moment in spring when the soil is in fair condition, relying on sufficient cold weather to follow sowing, and far germination to be delayed until the young seedlings will not be subject to heavy frosts. By Dr. C. R. Worth.

# TULIP BULBS

All prices quoted in quantities up 100 bulbs of a variety, are post paid in the U. S. Quantities quoted by the 1000 are NOT PREPAID. 25 bulbs at 100 bulb price; 250 bulbs at 1000 price, if taken in the variety priced. All bulbs are No. 1 size and of best quality.

## DARWIN TULIPS.

We know of no other Tulips so useful for various garden purposes as the Darwins, with their bright colors, their large flowers on long graceful stems and wonderful substance and lasting qualities. Forcing varieties are marked with a (\*) and make the finest material for pot plants and cut flowers from the end of Jan. thru all winter to Easter and Mothers Day.

For the garden border, plant in groups, spacing the bulbs 6" apart and planting about 5" deep according to soil conditions; they can be planted up to freezing weather.

## New and Superior Varieties:

**FARNCOMBE SANDERS.** Fiery rose - scarlet and extra choice for bedding, 30", cannot be recommended too much. Each, 10c; Doz. 12c; 100, \$1.30.

**GOLDEN AGE.** A magnificently formed and beautifully toned old gold that sparkle in the sun; it is one of the handsomest Darwins, 28". Each, 15c; Doz. \$1.20; 100, \$9.00.

**NIPHETOS.** Ivory - yellow with deep toned interior, yellow anthers, 29", highly recommended. Each, 15c; Doz. \$1.40; 100, \$10.50.

**PRINCESS ELISABETH.** A lovely rose-pink, a deep color but soft and clear, a graceful flower, 30". Each, 12c; Doz. \$1.30; 100, \$9.00.

**SUNKIST.** This is the true yellow Tulip without any variations in shades, blooming a beautiful golden yellow that does not burn or fade in the sun, 30". Each 15c; Doz. \$1.60; 100, \$11.50.  
**COLLECTION BEST NAMED VARIETIES.** (Our selection). Doz. \$1.20; 100, \$8.00; 1000, \$60.00.

## COTTAGE TULIPS

They are especially garden Tulips and differ from the Darwins mainly in their bright distinct colors and longer and pointed flowers; they bloom about the same time as the Darwins; there a few good forcers amongst them. They make excellent cut flowers.

**ALBINO.** A pure white and very large flower, a new variety, (\*), 22". Each, 15c; Doz. \$1.50; 100, \$11.00.

**GOLDEN HARVEST.** A splendid deep lemon yellow, early and showy, 30". Each 15c; Doz. \$1.30; 100, \$9.00.

**MRS. JOHN T. SCHEEPERS.** Ideal deep yellow, has won highest awards and will become one of the best varieties, 30". Each, 15c; Doz. \$1.50; 100, \$10.00.

## TRIUMPH TULIPS:

Hybrids between Darwins and Early Tulips, having a sturdy robust habit; the colors are exceptionally attractive with many bi-colors, selfs and some distinctly bordered and edged. While very effective in the garden they are also valuable forcing flowers, especially in pots or pans, coming into flower between the Early and the Darwins.

**ALBERIO.** Vigorous, large wine-red flowers distinctly edged in white, outstanding garden variety and fine forcer, 26". Each, 15c; Doz. \$1.25; 100, \$9.00.

**CROWN IMPERIAL** Lovely shade of red with narrow golden edge. Each, 15c; Doz. \$1.25; 100, \$9.00.

**DENBOLA.** Dark amaranth - red with broad creamy edge and bluish base; one of the best Triumphs, strong stems, 26". Each, 15c; Doz. \$1.50; 100, \$11.00.

## BREEDER TULIPS:

Bloom at same time as Darwins and make a great contrast with them; they are especially desirable for the garden and the colors are more towards art shades. They are very beautiful.

**INDIAN CHIEF.** Coppery dark red flushed with an overlay of burnished bronze, illuminated by a rosy glow on inner petals, 34". Each, 15c; Doz. \$1.50; 100, \$11.50.

## PARROT TULIPS:

They have artistic shapes, deep cut and fringed petals, and very large flowers and are especially valued as cut flowers as grown in the garden.

**BEST MIXED VARIETIES.** Doz. \$1.35; 100, \$9.50.

## TULIP SPECIES:

Species or botanical Tulips include a great number of beautiful and interesting kinds-in all variations of size, structure of leaves, habits, etc., and a number can be planted in the RG or in small nooks. Uerfect drainage and as a rule, 4-8 inches deep.

**KAUFMANIANA.** Water Lily Tulip. One of finest botanical tulips, pale primrose. exterior suffused carmine and flaked same color on tips; flowers early in April, 8". Each, 15c; Doz. \$1.25; 100, \$9.00.

# GARDEN SUPPLIES

POT STAKES - 5/8" wide. All Prices prepaid, painted white.

Lenght No. to	Wt. per Carton	Price	Price WS per Carton	1000
4 inch	1000 3 lbs.	.50c	\$3.41	UEL
5 inch	1000 3 3/4 lbs.	.55c	\$3.59	TCS
6 inch	1000 4 1/2 lbs.	.60c	\$3.92	TLS
10 inch	500 2 1/2 lbs.	.70c	\$3.03	LTS

SPECIAL GARDEN STAKES - 7/8" wide, painted white, all prices prepaid.

8 inch	250 2 1/2 lbs.	\$1.10	\$2.28	WWS
10 inch	250 3 1/2 lbs.	\$1.25	\$2.66	EES

SPECIAL GARDEN LABELS - 1 1/8" wide, painted white, Prepaid.

12 inch	100 2 1/2 lbs.	—	\$1.75	CFSS
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COPPER WIRED TREE LABELS - painted white, 5/8" wide, Prepaid

3 1/2 inch	1000 3 3/4 lbs.	.50c	\$4.08	TOS
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Wholesale prices are for full cartons, none broken, and prices are NOT PREPAID; if wanted by parcel post add postage. On retail orders where above items are included in a "Not Prepaid" shipment, postage will be allowed.

## VERMICULITE (Terra-Lite Brand).

Of special use for seed beds, for cuttings and in potting soil. All retail prices are post paid, postage will be allowed where shipped in collect shipments; wholesale prices are NOT prepaid.

4 qt. packages, 3/4 lb.	12 pkgs. to Paper Carton, TUS	48c
1/2 bushel package, 3 lbs.	6 pkgs. to Paper Carton, TFE	93c
2 bushel package, 12 lbs.	each C.F.T 2.30	

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